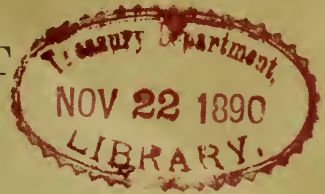


REPORT



OF THE

GOVERNOR OF WYOMING

TO THE

SECRETARY OF THE INTERIOR.

W. S. Wood

1889.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1889.

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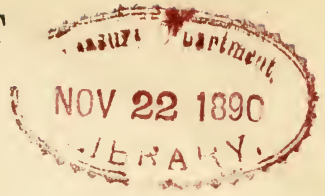
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REPORT OF THE GOVERNOR OF WYOMING.

EXECUTIVE DEPARTMENT,
Cheyenne, October 15, 1889.

SIR: Complying with your request of July 19, I have the honor to submit herewith my annual report for 1889, which contains the latest reliable data obtainable on the general condition and progress of Wyoming Territory. Its preparation has been somewhat delayed in order that the information contained in the reports of Territorial officers, for the year ending October 30, 1889, could be made available, and that I might also submit the results of the labors of the constitutional convention recently adjourned.

The reports of the governor to the Secretary of the Interior, in the absence of any other statistical reports, have always been regarded as valuable documents for disseminating knowledge on the resources of the Territory, and at no time in the history of Wyoming has the demand from outside the Territory been greater than now for reliable information on all subjects treated in these reports. In view of this and the importance which the people of Wyoming attach to the question of statehood, I have deemed it desirable to present as complete a report as possible at this time.

Acknowledgments are due Mr. Robert C. Morris, statistician, Mr. Elwood Mead, Territorial engineer, Mr. L. D. Ricketts, Territorial geologist, and others, for valuable aid in preparing this report.

THE TERRITORY.

Wyoming, the youngest of the Territories, occupies a space between the twenty-seventh and thirty-fourth meridian of longitude west and the forty-first and forty-fifth degree of north latitude, about 2,000 miles west from the Atlantic Ocean and 800 miles east of the Pacific, forming a parallelogram 365 miles east and west by 275 miles north to south, and containing nearly 100,000 square miles, or an area about as large as the six New England States and Indiana combined. It is bounded by Montana on the north, Dakota and Nebraska on the east, Colorado and Utah on the south, and Utah, Idaho, and Montana on the west. The larger part of the present Territory was acquired by the Louisiana purchase from France in 1803, but a small portion of southwestern Wyoming was obtained by the relinquishment of Mexico in the treaty of peace signed 1848.

Under an act of Congress approved July 25, 1868, Wyoming was created from what was then the southwestern portion of Dakota, the northeastern part of Utah, and the eastern part of Idaho.

The country was then to a great extent unexplored, wild Indians roved over the greater portion of the Territory, and life and property were nowhere secure. There were but a mere handful of white settlers within its borders, probably less than 3,000 actual residents. These had followed the construction of the Union Pacific Railroad, which entered near the southeast corner and traversed westward along the southern part of Wyoming, making possible the organization and settlement of the Territory.

Previous to 1840 very little was known of the country west of the Missouri. The mineral wealth of the country remained undiscovered and no one had been successful in reclaiming by cultivation the land from its desert character. Even as late as 1843, Washington Irving, in the *Adventures of Captain Bonneville*, describing the Rocky Mountain region now occupied in part by Wyoming, makes the following prediction of the future of the country and its people:

Some new system of things, or rather some new modification, will succeed among the roving people of this vast wilderness; but just as opposite, perhaps, to the inhabitants of civilization. The great Chippewyan chain of mountains and the sandy and volcanic plains which extend on either side are represented as incapable of cultivation. The pasturage which prevails there during a certain portion of the year withers under the aridity of the atmosphere, and leaves nothing but dreary waste. An immense belt of rocky mountains and volcanic plains, several hundred miles in width, must forever remain an irreclaimable wilderness, intervening between the abodes of civilization, and affording a last refuge to the Indian. Here roving tribes of hunters living in tents or lodges, and following the migrations of the game, may lead a life of savage independence, where there is nothing to tempt the cupidity of the white man. The amalgamation of various tribes and of white men of every nation will in time produce hybrid races like the mountain Tartars of Caucasus. Possessed as they are of immense droves of horses, should they continue their present predatory and warlike habits, they may in time become a scourge to the civilized frontiers on either side of the mountains, as they are at present a terror to the traveler and trader.

It is not strange that Irving, with a matchless power of description, should have laid the foundation of an opinion of the utter barrenness of the Rocky Mountain region that it is almost impossible to remove from the minds of those who have not witnessed the marvelous growth of the far West, even to this day. He little dreamed what railroads, the discovery of vast mineral wealth, and the application of modern machinery would do in developing the vast resources of the West. No more can we, comparing the past with the present, comprehend the great destiny that awaits the development of Wyoming within the next fifty years.

As late as 1870, the total population of Wyoming did not exceed ten thousand. The entire northern part of Wyoming was overrun with Indians, and it was not until 1876-77 that General George Crook succeeded in bringing these warlike tribes to peace.

The tribes of Indians then occupying Wyoming were the Sioux, Crows, Arapahoes, Shoshones, and remnants of other tribes. They remained here in greater or less numbers until compelled to go upon reservations elsewhere, the Utes on the south, in Colorado, the Sioux on the western limits of Dakota, and Crows on the southern limits of Montana, and the Shoshones and Arapahoes near the eastern limit of Idaho and a reservation in the Wind River Valley of Wyoming. The early settlement and industrial interests of Wyoming were much retarded through the hostility of these tribes, miners and settlers being driven from their mines and homes. To-day there are no Indians within the limits of Wyoming, except the Arapahoes and the Shoshones. These Indians occupy the Wind River Reservation, covering an area of 1,520,000 acres. They are

peaceful and have made some progress in education and agricultural pursuits.

Wyoming takes its name from the Indian word "Maughwanwame," meaning plains, and first had its application in the Wyoming Valley of Pennsylvania. The general surface of the Territory is mountainous, with foot-hills, bold bluffs, broad rolling plains or undulating plateaus, with a mean elevation of about 6,000 feet. The average elevation is 1,000 feet less than Colorado. The extremes range from 3,000 to 14,000 feet above the sea level. Numerous rivers and their tributaries flow throughout the Territory, while the sublimity and grandeur of scenery is unsurpassed by any part of the globe. The principal ranges of mountains in Wyoming are the Wind River in the northwest, the Big Horn north of the center, the Black Hills in the northeast, the Laramie range south of the center, and the Rattlesnake and Sweetwater in the central portion of the Territory. Several of the great rivers of the continent, including the Missouri, the Colorado, and the Columbia, have their headwaters in Wyoming. The Yellowstone and its tributaries, the Big Horn, Powder, Little Missouri, and Cheyenne, flow from the northern part of the Territory emptying into the Missouri, on the north; the Green River and its tributaries traverse the southwest flowing into the Colorado; the Snake River is the chief tributary of the Columbia in the west, and the north fork of the Platte with its many tributaries flows through the center and southeastern portion of Wyoming. None of the rivers of the Territory are navigable, but they are the natural avenues for railroads, and along their banks will be located the future cities and towns of the commonwealth. The rich mineral treasures of the mountains will be poured into the valleys and plains, which in turn will supply the agricultural and stock-raising products.

Wyoming has a total area of 62,645,120 acres, of which the greater portion is adapted to grazing and agriculture. It is estimated that between 12,000,000 and 15,000,000 acres can be successfully cultivated, and that nearly 10,000,000 acres are covered with timber. The soil is generally a rich sandy loam, and where it is irrigated below 7,500 feet produces abundantly all the cereals, vegetables, and fruits common to the northwestern States. Farming is not yet carried on in very many places, the chief industry being stock-raising. A marked change, however, is rapidly taking place in the combination of pastoral and agricultural pursuits. The stock-raising industry comprises nearly one-half the total wealth of the Territory; but five years ago this industry represented more than three-fourths the entire valuation of property. Other industries have increased faster than live-stock raising, and the extension of railroads will give greater prominence to other interests. The geological surveys of Wyoming demonstrate that the outcropping and underlying material forming its physical structure is greatly varied in character, nearly all the precious, superior, and baser metals being found in large quantities. With the exception of coal, the output of which last year exceeded \$5,000,000, the mineral wealth of Wyoming can hardly be said to be developed. Coal is found in every county of the Territory in inexhaustible quantities, and extensive basins of petroleum are known to exist in northeastern, central, and southwestern Wyoming. There are also mountains of valuable iron ore, vast deposits of gypsum, soda, salt, sulphur, copper, lead, tin, mica, and other minerals; also marble, granite, sandstone, mineral paint, kaolin, fire-clay, graphite, cinnabar, and magnesium. Gold and silver bearing ore has been found and profitably worked in numerous localities. Much of this wealth is remote from railroads, and only awaits the advent of

the iron horse before inviting capital for investment. The climate is healthful, and has been pronounced by high authority as the most salubrious of North America.

STATEHOOD.

The people of Wyoming want statehood. Men who have braved all the perils of pioneer life, have laid broad and deep the foundations of future homes, towns, and cities, and have treasured up the means that is to uphold the commonwealth are not unmindful of the advantages of state government.

Although the present Administration has greatly relieved the situation by appointing all Territorial officers from the bona fide residents of the Territory wherein they are to serve; the people know from past experience what it is to live under a Territorial form of government, governed by strangers with little or no knowledge of the wants of the Territory, and indifferent to its future growth and prosperity.

There are men who have lived in Wyoming for more than twenty years, and have never cast a vote for President. They desire the full benefits of citizenship. Wyoming has the wealth, the moral worth, and the intelligence to bear the burdens of statehood, and its citizens are anxious to assume that condition with all its cares and responsibilities, with all its blessings and privileges.

Attention was first directed to the subject of statehood in my annual report as governor to the Secretary of the Interior in 1885, and again in 1886. It was not, however, until the Fiftieth Congress that Hon. Joseph M. Carey, delegate for this Territory, introduced a bill for the admission of Wyoming as a State, and the tenth legislative assembly, in February, 1888, memorialized Congress on the same subject. Early in 1889 the Senate Committee on Territories reported favorably on the bill to admit Wyoming, and about the same time a bill was also favorably reported in the House of Representatives intended to enable the people of Wyoming, Arizona, and Idaho to formulate constitutions with a view of being admitted into the Union on an equal footing with the other States.

In assuming the office of governor, on the 9th day of April last, I expressed in my inaugural address a willingness to co-operate with the people in securing the admission of Wyoming as a State. The following month a majority of the counties of the Territory, through the several boards of county commissioners, requested the executive, with the aid of the chief-justice and secretary, to apportion the number of delegates, and to do such other acts as would be necessary for convening a constitutional convention in the manner and form prescribed by Senate bill No. 2,445. In conformity with the request an apportionment was made on the 3d day of June, 1889, and a proclamation issued designating the second Monday in July, 1889, for an election of delegates to a constitutional convention to convene at the capitol at Cheyenne, on the first Monday in September following, for the purpose of framing a constitution for the State of Wyoming, and submitting the same to the people for ratification or rejection. An election having been held, the convention assembled at Cheyenne, and was in session from the 3d day of September to the 30th, inclusive. The result of their labor is embodied in a constitution and address to the people and Congress, which are attached and made a part of this report, together with the apportionment and proclamation above referred to.

POPULATION.

The first census of Wyoming Territory was taken in 1870, and showed a total population of 9,118, as follows:

Counties.	Males.	Females.	White.	Colored.	Total.
Albany.....	1,635	386	1,971	50	2,021
Carbon.....	1,193	175	1,360	8	1,368
Laramie.....	2,240	717	2,822	135	2,957
Sweetwater.....	1,492	424	1,777	139	1,916
Uinta.....	659	197	796	60	856
Total.....	7,219	1,899	8,726	392	9,118

The full vote for delegate in Congress at that time was 3,202, or a little more than one vote to every three persons.

It will be observed that nearly three-fourths of the total population were males, and nearly all were adults. There were but few children and scarcely a school-house in the country, while at the present time there are many thousands of children and school-houses in nearly every district.

The population, according to the census of 1880, was 20,789, distributed as follows:

Counties.	Males.	Females.	White.	Colored.	Native.	Foreign.	Total.
Albany.....							4,026
Carbon.....							3,438
Laramie.....							6,409
Sweetwater.....							2,561
Uinta.....							2,879
Crook.....							239
Johnson.....							637
Total.....	14,152	6,637	19,490	299	14,944	5,845	20,789

The vote in 1880 was 7,667.

As communities grow older the ratio in population compared with the vote increases, a change especially noticable in Wyoming, which is now a community of homes and families. Well informed judges on the subject, that have lived in the Territory since its organization, estimate the present population from 95,000 to 105,000. They believe that the vote should be multiplied by 5 or 6, notwithstanding that women have the right of suffrage.

Wyoming is the eighth largest in size of the political divisions of the Union, her population in proportion to the area small, and the inhabitants widely scattered. But few voting places are made, and many people live one to three days' journey from the polls. On account of this condition not one man in twenty in the stock business and not one in fifty of those engaged in prospecting or mining reach the polls.

In coal mines and in cities and towns a large number of aliens who have no vote are employed.

A change in the law requiring six months' residence instead of ninety days to vote debars many newcomers from voting.

Wyoming's population being largely medium-aged, the proportion of children is unusually large.

Since 1880 no census has been taken. In 1884 the vote was 12,811, an increase of nearly 70 per cent. in four years. In 1888 the vote for Delegate in Congress was 18,010, an increase of over 40 per cent. There has been a constant increase in Wyoming's population, and the gain has been very much greater than shown by the vote, for reasons already given.

Wyoming is nearly 50 per cent. larger than the entire six New England States. It is in part mountainous and undeveloped, with scant railroad, stage, and post facilities, and many people living in remote districts. Census taking by the Government does not provide sufficient compensation to insure perfect work in such a field, and the taking of a full and complete census has been, and will be for some years, exceedingly difficult.

TAXABLE PROPERTY.

The increase of wealth in Wyoming is shown by an examination of the assessment rolls since the organization of the Territory. These statements do not represent more than one-third of the actual valuation of the property assessed, and probably not more than one-quarter of the actual value of property; but they represent a uniform assessment of value from year to year, and therefore afford a correct basis of comparison. The total assessed valuation of all property in 1870 was \$6,924,357. In 1880 it had increased to \$11,857,344; and in 1888, to \$33,338,549. A depreciation of over \$5,000,000 from 1886 to 1888 in the assessment list of live-stock was made up in the increase of other property. Notwithstanding the heavy losses in live-stock interests, the total Territorial valuation has steadily increased. The assessment in 1889 of \$6,163,336.50 on railroad property is almost equal to the entire valuation of property in Wyoming in 1870. The low rate of assessment is apparent when it is stated that the total railroad equipment in Wyoming has cost, according to competent authorities, not less than \$35,000,000, and is assessed at less than one-fifth of that sum. Other property is not assessed as low accordingly, but it is safe to estimate the wealth of Wyoming at \$100,000,000, or about three times its assessed valuation.

The financial affairs of Wyoming have been well managed, and the credit of the Territory stands high. The Territorial bonds, which bear 6 per cent. annual interest, sold last year at an average premium of 12 per cent. The law for raising Territorial and county revenue provides that there shall be levied upon the taxable real and personal property each year the following taxes:

First. For Territorial revenue, 2 mills on the dollar when no rate is directed by the Territorial board of equalization before the date in each year when the tax ought to be levied and assessed, but in no case shall the tax for Territorial purposes exceed 4 mills on the dollar.

Second. For county revenue for ordinary county expenses, not more than 5 mills on the dollar.

Third. For county revenue for support of the poor and lunatic purposes, not more than 2 mills on the dollar.

Fourth. For county revenues for road purposes, not less than 1 mill nor more than 3 mills on the dollar.

Fifth. The county commissioners of each county shall levy a tax sufficient to defray the expenses of the district courts for their respective counties during each year.

Sixth. And in addition to the above the county commissioners shall levy a poll-tax of \$2 for county school purposes against each person over the age of twenty-one years and under the age of fifty years, which shall be levied and collected as other taxes; and they also levy a tax for the support of common schools in their county not to exceed 3 mills on the dollar; but the aggregate tax for Territorial and county purposes shall in no case exceed 16 mills on the dollar per annum.

On January 1, 1886, Wyoming had a cash balance on hand of \$31,175.45 and no outstanding obligations. The Territorial taxes since

that time have been increased over previous years on account of appropriations for permanent improvements, such as public buildings. These appropriations, however, have at all times been within the limits of the laws. The same careful economy which has characterized the management of Territorial affairs, with few exceptions, has been carried out in the counties and towns of the Territory.

The legislature of 1886 authorized the issuing of \$230,000 bonds for public buildings, payable in fifteen and thirty years, bearing an annual interest of 6 per cent. These bonds were sold at a premium, and were issued from time to time as the money was needed to carry on the work of construction. An additional appropriation of \$90,000 forty-year bonds was provided for by the legislative assembly of 1888, and sold at an average premium of 12 cents on the dollar. The following is a statement of the total bonded indebtedness of Wyoming:

Capitol building bonds (authorized in 1886).....	\$150,000
University building bonds (authorized in 1886).....	50,000
Insane asylum building bonds (authorized in 1886).....	30,000
Public building bonds (authorized in 1888):	
University building.....	\$25,000
Insane asylum.....	30,000
Poor farm.....	5,000
Commencement of penitentiary.....	30,000
	<hr/>
	90,000
Total.....	320,000

Wyoming has no floating indebtedness, and had, October 1, 1889, \$47,752.76 cash in the Territorial treasury.

The following shows the increase in lands passing into the hands of owners and becoming taxable:

Acres of land assessed, exclusive of town property.

County.	1886.	1889.	County.	1886.	1889.
Albany.....	70,596	955,866	Laramie.....	180,637	915,140
Carbon.....	35,864	1,201,627	Sheridan.....		63,480
Converse.....		51,317	Sweetwater.....	12,308	1,800,000
Crook.....	21,739	91,802	Uinta.....	23,102	679,004
Fremont.....	8,232	31,914			
Johnson.....	42,311	78,220	Total.....	394,789	5,868,370

The following statement shows the assessed valuation of property in Wyoming Territory from 1870 to 1889, inclusive:

Total assessed valuation.

Years.	Total valuation.	Years.	Total valuation.
1870.....	\$6,924,357	1880.....	\$11,857,344
1871.....	7,018,531	1881.....	13,987,675
1872.....	7,591,846	1882.....	17,746,627
1873.....	7,594,722	1883.....	22,962,545
1874.....	8,147,902	1884.....	26,308,620
1875.....	9,493,638	1885.....	30,717,249
1876.....	9,674,576	1886.....	31,020,784
1877.....	10,038,689	1887.....	32,089,613
1878.....	11,606,339	1888.....	*33,338,541
1879.....	12,354,812	1889.....	†31,431,495

* An error in double assessment afterward reduced the figures given in the above statement for 1888.

† The valuation above for 1889 is not entirely complete. Some additional property will be added.

Tables showing the enumeration and classification of property and assessment on each class, also division of property in counties, with all totals, will be found near the end of this report.

FINANCES.

The financial standing of Wyoming is high. Bonds of the Territory bearing 6 per cent. annual interest sold at above 12 per cent. premium, and Territorial warrants are always par and promptly paid when presented. Neither the Territory nor any county, school district, or city has ever defaulted in the payment of any bond or interest. No national bank has ever suspended or gone into liquidation, and but four private banking institutions have failed since the organization of the Territory. There have been few mercantile failures, and individual financial responsibility through the Territory is of a high order.

Banks.—The growth of banking institutions in Wyoming indicates perhaps better than any other line of business the material prosperity in different branches of trade. In 1871 there was only one national bank in the Territory, having a capital of \$75,000. At the present time there are nine national banks, having a total capital of over \$1,000,000, and eleven private banks. The following exhibit is taken from the last report of the Comptroller of the Currency:

Summary of national banks, the important items of resources and liabilities, and the totals, etc., in Wyoming Territory.

Year.	No. of banks.	Loans and discounts.	U. S. bonds.	Cash and cash items.	Capital.	Surplus.	Un-divided profits.	Out-standing circulation.	Indi-vidual de-posits.	Total.
1871...	1	\$77,000	\$30,000	\$15,000	\$75,000	-----	\$3,000	\$27,000	\$55,000	\$161,000
1872...	1	99,000	30,000	26,000	75,000	-----	5,000	27,000	81,000	188,000
1873...	2	203,000	60,000	34,000	125,000	-----	23,000	51,000	162,000	363,000
1874...	2	199,000	60,000	58,000	125,000	\$10,000	26,000	54,000	190,000	412,000
1875...	2	246,000	60,000	62,000	125,000	16,000	49,000	49,000	297,000	539,000
1876...	2	198,000	60,000	96,000	125,000	21,000	29,000	50,000	265,000	498,000
1877...	2	303,000	60,000	89,000	125,000	25,000	62,000	52,000	311,000	580,000
1878...	2	285,000	60,000	129,000	125,000	25,000	89,000	42,000	369,000	657,000
1879...	2	385,000	60,000	79,000	125,000	50,000	58,000	53,000	444,000	753,000
1880...	2	492,000	64,000	109,000	150,000	50,000	39,000	52,000	535,000	841,000
1881...	3	730,000	94,000	201,000	225,000	50,000	48,000	83,000	856,000	1,306,000
1882...	4	991,000	194,000	219,000	425,000	78,000	71,000	127,000	1,185,000	1,928,000
1883...	4	1,313,000	219,000	242,000	425,000	103,000	95,000	123,000	1,004,000	2,436,000
1884...	4	1,604,000	235,000	209,000	525,000	78,000	107,000	138,000	1,418,000	2,509,000
1885...	5	1,861,000	155,000	309,000	800,000	140,000	152,000	140,000	1,744,000	3,067,000
1886...	6	2,335,000	180,000	401,000	900,000	167,000	193,000	160,000	1,768,000	3,998,000
1887...	8	2,527,000	224,000	305,000	1,075,000	210,000	180,000	201,000	1,697,000	3,568,000
1888...	9	2,419,000	249,000	298,000	1,175,000	213,000	115,000	221,000	1,731,000	3,654,000

The following banks are now doing business in this Territory :

Town.	County.	Name of bank.	Capital.	Surplus.
Buffalo.....	Johnson	First National	\$50,000	\$16,000
Casper.....	Natrona	Bank of Casper.....	5,000	-----
Cheyenne.....	Laramie	Cheyenne National	100,000	12,000
Do.....	do	First National.....	200,000	75,000
Do.....	do	Stock Growers' National.....	400,000	64,000
Do.....	do	T. A. Kent	100,000	-----
Douglas.....	Converse	First National	75,000	10,000
Evanston.....	Uinta	Mutual Exchange Bank	35,000	7,375
Do.....	do	Beckwith & Co	78,000	3,000
Green River.....	Sweetwater	Hunter & Morris	25,000	-----
Lander.....	Fremont	First Lander Bank	-----	-----
Laramie City.....	Albany	Albany County National Bank.....	100,000	27,000
Do.....	do	Laramie National Bank	100,000	28,000
Do.....	do	Wyoming National Bank	100,000	-----
Lusk.....	Converse	Richards Bros	-----	-----
Rawlins.....	Carbon	J. W. Hugus & Co	50,000	-----
Rock Springs.....	Sweetwater	First National	50,000	500
Sheridan.....	Sheridan	Bank of Sheridan	50,000	-----
Sundance.....	Crook	Bank of Sundance	25,000	1,500
Do.....	do	Crook County Bank	10,000	2,500

Interest rates.

Per cent.

Legal rate of interest on public indebtedness.....	8
Legal rate of interest on all other indebtedness when no contract is made...	12
Bank loans on short time.....	12
Real-estate loans, one year.....	7 to 12
Real-estate loans, two or more years.....	7 to 10
Interest paid on bank deposits.....	6 to 8
Interest on Territorial bonds.....	6
Interest on municipal and school bonds.....	6
(A few of the first issued bonds of this character carry 7 and 8 per cent.)	
Interest on city, county, or Territorial warrants.....	8
Interest on long loans, well secured.....	6

Judgments draw 12 per cent., book accounts draw, after thirty days from date of last item purchased, 12 per cent. Any rate of interest agreed upon in contract is legal.

SETTLEMENT OF LANDS.

Public lands.—The total number of acres of land in Wyoming is 62,645,120, of which 47,596,141 acres have been surveyed. There remain unsurveyed 15,548,979, or about one-quarter of the total area.

Land matters in this Territory were seriously hampered for several years by the withholding of patents and the disposition of those in authority to regard with suspicion the men who were trying to settle and make habitable the public domain, to push ahead land and ditch surveys and other necessary work. This policy has seriously retarded the development of the country; but the recent action of the General Land Department in issuing numerous patents a long time wrongfully withheld has greatly improved the condition of things.

It is evident the United States land laws in relation to acquiring title to public lands were originally made in view of settling up the more fertile prairie States, and when applied to our mountain regions, where crops are seldom raised without artificial irrigation, work great hardship and injustice to actual settlers. In the Mississippi and Missouri valleys there is a plentiful fall of rain, and 160 acres located in almost any part of that section is generally regarded sufficient for a fine farm; but in Wyoming, leaving out a limited area of land along the streams, 160 acres would scarcely support five full-grown domestic animals without largely increased expenditures in taking out ditches and water. Under the land laws and regulations of the Department our citizens have been held to the same rulings as the more fortunate settlers in the western States, and compelled to pay the same price for inferior lands. Bills have been introduced in Congress which, if passed, will repeal the desert-land laws, depriving us of the advantages conferred by this act, and also repeal the pre-emption and timber-culture acts. A thorough knowledge of the character of the land on the part of those who legislate on this subject will, in my opinion, lead to a more liberal policy in dealing with the people of the arid region.

Public surveys.—There is complaint on the part of settlers that they are unable in many instances to fix the boundaries of the land on which they are located, on account of erroneous and fraudulent surveys, and the necessity of making resurveys in order to locate accurately some of the disputed claims is very important.

Doubtless the majority of these faulty surveys were made under the "special deposit system," during which period alleged fraudulent returns were made of surveys unattempted or erroneously performed. These errors should be corrected by prompt resurveys. I am informed

than these defects can in many cases be remedied at a very small expense if the townships from which complaints come can be examined by an expert who could determine what lines should be retraced.

It would much benefit this Territory if Congress would adopt a more liberal policy in the matter of public surveys. By the terms of the appropriation bills of late years no surveys were authorized except of agricultural lands occupied by settlers. As the surrounding lands were not classed as agricultural, no contracts could be made for the survey of many of these agricultural districts, because the compensation was not sufficient to pay for their segregation. The effect of this is, that there are many settlers who have been living upon unsurveyed lands for many years improving their farms and raising crops. One of the finest agricultural exhibits displayed at our last Territorial fair was grown upon unsurveyed lands. The inability of a settler to obtain a legal right to the land selected by him for a home works a threefold injury; first, to the Government, which receives no pay for the land; next, to the county and Territory, which derive no revenue from it, and lastly, to the settler, who can obtain no title to the land and is hazarding his improvements, which are of no value to him in a commercial sense, as he can neither sell nor mortgage them. Moreover there are large tracts of unsurveyed land in this Territory which are valuable for other purposes than agriculture. There are immense oil fields and coal beds and vast forests of valuable timber yet unsurveyed. In its present unknown condition it is impossible to protect the forests against the depredations of unscrupulous men, and the development of the coal and oil lands is retarded by the impossibility of surveying them under the present restrictions.

The number of acres of public lands disposed of in Wyoming for cash and under the homestead and timber-culture acts, located with agricultural college and other kinds of scrip, located with military bounty land-warrants, and selected by the Territory and by railroads, aside from Union Pacific Railway land grant, is as follows:

Year.	Acres.	Year.	Acres.
1876.....	7,487.42	1884.....	595,786.88
1877.....	5,156.00	1885.....	552,967.14
1878.....	23,333.67	1886.....	453,572.51
1879.....	33,330.64	1887.....	424,780.20
1880.....	44,146.83	1888.....	242,306.78
1881.....	48,955.92	1889.....	301,375.51
1882.....	58,307.25		
1883.....	187,488.65	Total	2,978,995.40

The above does not include lands disposed of prior to 1876, of which some 5,000,000 acres were Union Pacific Railway subsidy lands, now largely disposed of and occupied by private owners.

From the above figures it will be seen that there are many million acres of Wyoming lands open for settlement under homestead, pre-emption, and other privileges, and the field is rich for the emigrant desiring a new country and early privileges in the selection of lands.

United States land offices are located at Cheyenne, Buffalo, and Evanston. There is need of land offices in other parts of Wyoming.

Sale of public lands.

The following figures furnish some particulars regarding the disposal of public lands during the fiscal year of 1888 in Wyoming.

Nature of transaction.	Number.	Acres.	Amount.
Sales of lands subject to pre-emption.....	279	42,244	\$56,753.76
Sales of mineral lands.....	5	155	545.30
Original entries under desert-land act.....	220	73,782	24,520.78
Final entries under desert-land act.....	234	83,285	85,470.78
Homestead entries commuted to cash.....	24	3,703	5,429.95
Sales of coal lands.....	42	6,590	104,809.40
Total cash sales.....	804	211,764	277,529.97
Original entries under homestead laws.....	420	65,959	7,246.00
Final homestead entries.....	81	12,253	555.00
Original entries under timber-culture laws.....	360	53,260	4,865.00
Total miscellaneous entries.....	861	131,472	12,666.00
Pre-emption filings.....	640		
Homestead filings.....	6		
Coal filings.....	139		
Mineral applications.....	16		
Aggregate.....	2,466	242,306	290,195.97

The expenses incident to the service were: Salaries, \$12,206.55; incidental expenses, \$4,020.63; expense of depositing, \$238.90; total, \$16,466.08.

Reservations.—The following is a list of the total area of military and Indian reservations in Wyoming:

	Acres.
Fort Bridger.....	10,240
Fort Laramie:	
Post reserve.....	34,560
Wood and timber reserve.....	39,690
Fort D. A. Russell:	
Adjoining city of Cheyenne.....	4,512
Wood reserve.....	2,540
Fort Washakie, within Shoshone Indian Reservation.....	1,405
Fort McKinney, post reserve and wood and timber.....	26,240
	119,187
Shoshone Indian or Wind River Reservation.....	1,520,000

There are also the abandoned military reservations of Fort Sanders and Fort Fetterman, that ought to be opened up to settlement or sale, preferably the former. Both reservations are located on a line of railroad, contiguous to growing towns, and their settlement would advance the general prosperity of the community.

Arid lands.—Wyoming is within what has been known as the Arid Region, and while crops are raised in a number of localities without water artificially applied, yet irrigation is necessary in many places and beneficial in nearly all.

There will be found in (part 2) this report valuable data, furnished by Elwood Mead, Territorial engineer, on the subject of irrigation as bearing upon these lands.

In this same connection I quote from the late report made by Mr. J. R. Dodge, statistician of the United States Department of Agriculture, who has recently visited Wyoming. He says:

The desert of a few years ago, so bare and barren and so hopeless, in the view of all beholders, estimated only at the value of its carrying capacity for range cattle and

sheep, is rapidly changing in appearance and in public appreciation. Its eastern portion, as a newly-found "rain belt," has been carved into homesteads and farmed without regard to irrigation. It was held alike by sage and citizen twenty years ago that half of Nebraska was agricultural, the other half pastoral; that successful agriculture could not be expected to succeed beyond the 100th meridian. The settler gradually moved westward and, utterly regardless of this dictum, passed the desert line, building his cabin and turning the soil and growing corn, stopping not even at the Colorado line. * * * He had been told that a year of drought and starvation would come, and some pinching droughts have confronted him, as they have the farmer of Illinois; still he has pushed westward with heroic determination, breaking and subduing the soil, and showing by his improvements that he is there to stay. * * * Deep breaking, subsoiling, and frequent cultivation, processes the very reverse of those practiced by the pioneer farmer, are the sources of the new prosperity. * * *

There is a change of climate. The agricultural values of the climate have increased. The moisture that was before carried away, flowing from the surface like water from a duck's back, is taken up by the roots of plants, given out through their leaves or evaporated from the surface of the soil, and a marked increase of humidity of the atmosphere is the result which is shown in dews unknown before. This humidity is a factor in plant growth, though it is not made apparent by such a measure of precipitation as the rain-gauge.

Thus the homestead area, supposed to be limited to 200 miles west of the Missouri, already extends about 400 miles.

After all that has been done in dry farming, irrigation is a necessity. The land is almost everywhere fertile, generally to excess, lacking only water to insure large and certain production. This source of production can be more fully utilized, greatly enlarging the dominion of agriculture, though it can not render productive the entire area. In Colorado some are inclined to claim adequate water supply for one-fifth of the surface; while others, including local engineers of experience, think that not more than a tenth can be irrigated. The different stages of progress in water utilization are six in number.

1. The use of the rain-fall in what are properly known as rain belts, by the most effective methods of cultivation, and the selection of suitable plants, especially those with long tap roots.

2. The exhaustion of the supply furnished by rivers and creeks in their passage through the plains, by means of irrigation works, such as are already in so extensive use.

3. The enlargement of the current supply by the storage, at higher elevations, of water which passes away in spring floods, as is proposed now by the Government.

4. The sinking of galleries below the surface of streams, even when they are practically dry, and utilizing by canals the under-ground currents. This is becoming a common and popular resource. Such a plan furnished pure, filtered water at Cheyenne, for the supply of the city, without pumping or much expense, from Crow Creek, a small stream, nearly dry in summer.

5. By the use of irrigating pumps of great power in lifting such under-ground currents to the surface from bed rock, for application to lands surrounding.

6. By artesian wells, which have hitherto proved too expensive for use in irrigation. It is probable that their cost and the uncertainty of obtaining water will prevent extensive employment of this means of water supply.

The building of numerous catch-basins throughout the plains to save the rain-fall which is wasted, so far as the lands near by are concerned, will add greatly to the supply furnished by the second expedient indicated. There are natural depressions everywhere which can be utilized at very slight cost and with entire immunity from risks of dangerous floods.

The utilization of surface water does not exhaust the supply for irrigation. The application involves waste. The fugitive waters, as if by an instinct of preservation from threatened dissolution under the fierce rays of the unobscured sun, sink through the sands, pass into the depressions which make the water-ways, and gradually swell the scanty streams at lower levels, or course their way towards the sea through the sands below the river beds. Thus, a part of the water of irrigating canals is gathered a second time to do the work of irrigation.

COMMERCE AND THE PROGRESS OF RAILROAD ENTERPRISES.

Wyoming is without navigable rivers to give an outlet to the products of its mines, farms, and stock ranges, and its commerce must depend on the extension of railroads.

The Territory has, however, some six hundred rivers and creeks, from which water is taken for irrigation, and there are numerous streams

that have not been used for that purpose. All these streams furnish good grades for railroad building.

The contour of the Territory is such that streams heading near the tops of the mountains flow in almost every direction. On account of the ascending grades along streams on one side of the mountains, and others descending on the opposite side, it requires at the top of mountains or divides little heavy work or tunneling in railroad building to cross the ranges. Railroads, in most instances, can be constructed in any direction, and easy crossings made of divides, notwithstanding the general appearance of a section may seem exceedingly mountainous.

Railroads.—The following shows the total number of miles of main lines of railroad operated in Wyoming on June 30, 1889:

	Miles.
Union Pacific Railway Company	489
Oregon Short Line	93
Denver Pacific	10
Laramie, North Park and Pacific	13
Cheyenne and Northern	125
Wyoming Central (Northwestern)	130
Cheyenne and Burlington	29
Total	889

Union Pacific.—The completion of the Union Pacific in 1868 opened Wyoming to settlement. Without the construction of a transcontinental railroad, the Territory would have remained uninhabited except by savages and wild game for many years. From 1868 until 1887 very little railroad building was done in the Territory. In 1887 the Wyoming Central, a branch of the Northwestern, and the Cheyenne and Burlington reached Wyoming. In January, 1887, there were reported 624 miles of railroad in Wyoming, representing, according to authorities, a total investment of \$33,146,621. Since that time the roads above mentioned have been extended and numerous railroads projected, which promise to gridiron the Territory in all directions.

The great want of Wyoming to-day is railroads to give an outlet to its varied productions, especially its oil, coal, and other mineral products, and to fill its valleys with a numerous and prosperous population.

The completion of the main line of the Union Pacific Railway resulted in opening up and stimulating the development of the agricultural and mineral resources of the vast territory which it traversed. Local traffic sprang up along the line of the road and promoted the construction of branch lines as feeders to the main. A few feeders only have been built, but others are necessary, also the further extension of those already commenced. The Union Pacific needs branch lines to foster and protect its local traffic and to furnish business for its system, and the country requires more railroads to promote its occupancy and settlement.

The operations of the Union Pacific are said to be seriously embarrassed by the unsatisfactory relations existing between the Government and the railway company, and the inhabitants of this country are the sufferers because of the lack of necessary railroad development. Congress should arrange a speedy settlement and one that would admit of the Union Pacific being granted the right to build branch lines in self-protection, without which the main line must become like the trunk of a tree—without roots or branches—in its relations to the greater portion of the territory naturally tributary to the Union Pacific.

Cheyenne and Northern.—This branch runs from Cheyenne in a north-westerly direction 125 miles, and is surveyed and cross-sectioned a considerable distance farther. The building of this road across the North-

western and Northern Pacific to the national line, with its branch running east of the Big Horn Range and another west, will greatly facilitate the requirements of traffic and travel and form a grand north and south trunk line. At Cheyenne the Cheyenne and Northern connects with the Denver Pacific, and that, with other connections, forms a southeasterly and northwesterly line, extending now from Texas and Mexico through Cheyenne to the North Platte River. When finished it will cross the entire width of the United States to the British Possessions, intersecting all the transcontinental lines running east and west.

The Cheyenne and Burlington.—The Cheyenne and Burlington Railroad, through the lines of the great corporation of which it forms a part (the C., B. and Q.), and by means of its connections with many other railroad organizations, is brought in direct communication with all the sources of transcontinental traffic east of the Missouri River. This line reached Cheyenne in December, 1887, by an extension of one of its Burlington and Missouri main lines from central Nebraska. Surveys have been made south from Cheyenne to connect with the Colorado system; west from Cheyenne, through the Elk Mountain coal-fields; also north from Cheyenne, along Horse Creek, to a point on the Broken Bow line of the Burlington system, and thence both roads join in a route to the Pacific coast, following the Laramie River, through the North Laramie cañon, into the Laramie plains. Another branch about 200 miles in length is now under construction, from Alliance, Nebr., a few miles east of the Wyoming boundary, into Crook County, Wyo., with a view of tapping the coal-fields in southern part of the county, and the rich resources of the Black Hills, and thence perhaps crossing over to the Yellowstone National Park. The iron rails on this branch have been laid for a distance of 126 miles. There is also contemplated an extension of the Utah, Denver and Pacific, which is now owned by the Burlington, both to Cheyenne and Laramie City, from the south. The Burlington interests have secured some of the most valuable coal lands in Wyoming north and west of Laramie, also in northeastern Wyoming.

Northwestern.—The western extension of the Fremont, Elkhorn and Missouri Railroad from Chadron, Nebr., in 1886-'87, into the central portion of Wyoming is known as the Wyoming Central, and is one of the main branches of the great Chicago and Northwestern Railroad system. This road enters Wyoming about 150 miles north of the Union Pacific Railway, and will traverse the entire length of central Wyoming, opening up a region possessing both agricultural and mining resources. The Wyoming Central has now reached Casper, Wyo., a point 130 miles west of the eastern Territorial line, and has about 300 miles to construct before making the junction with the Central Pacific, at Ogden, Utah. The completion of this road will make it one of the great transcontinental railroads of the country.

New railroads.—Under the general act of Congress the following roads have been granted the right of way in Wyoming:

The Sioux City and Ogden, through central Wyoming and northeastern Nebraska, passing through the towns of Douglas, Glenrock, Casper, and the Sweetwater Valley. Operations on its construction have already commenced at the Sioux City end of the line.

The Union Pacific and Western Colorado survey runs from the Union Pacific, at Fort Steele on the Platte River, in a southeasterly direction into Colorado. This road is graded for a distance of about 25 miles.

The Laramie, North Park and Pacific extends in a southwesterly direction from Laramie City for about 13 miles.

The Wyoming and Midland is promised from Lander north, following the Big Horn River to the Northern Pacific. On one of its branches Congress has granted this road the right of way across the Wind River Reservation.

The Billings, Clark's Fork and Cook City Railroad has a survey from Billings, on the Northern Pacific Railroad, through the northwest corner of Wyoming Territory, the Yellowstone National Park, and connecting with the Wyoming Midland.

The Wyoming Southern, a branch of the Northern Pacific, promises a line from Montana via Sheridan, Buffalo, and Casper.

A line of railroad is also projected from Evanston, Wyo., a survey having been made, and the preliminary steps taken towards its construction.

Thus it will be seen Wyoming has nearly 1,000 miles of main line under the management of the three greatest railroad corporations of the world. With the prospect of having numerous branch roads the future agricultural, mineral, and industrial development of Wyoming is assured.

DEEP-WATER HARBOR.

The question of securing a deep-water harbor on the coast of Texas, as affecting the commercial, agricultural, mining, and stock-raising interests not only of Texas but of all the territory north and west of Texas, is of vital importance and has already attracted wide attention. The saving to this region by the construction of such a harbor is incalculable, and deserves the earnest consideration of Congress. The citizens of Wyoming take a deep interest in the subject and sent delegates to the Deep-Water Convention held at Denver, Colo., in 1888, and also at Topeka, Kans., in 1889. The Wyoming constitutional convention, lately assembled, framed the following preamble and resolution:

Whereas the Territory of Wyoming has great agricultural, mineral, and industrial interests that require for their development trunk lines of railroad running north and south, and extending from the province of British Columbia to the Gulf of Mexico, thereby opening to its farmers, miners, and artisans additional markets, and enabling them to compete with the States nearer the seaboard by exchanging the products of this section for the products of the South; and

Whereas these results must and will be naturally advanced by the establishment of a deep-water harbor in the Gulf of Mexico: Now, therefore, be it

Resolved, by the delegates of the constitutional convention of Wyoming, That the establishment of a deep-water harbor or harbors on the Texas coast of the Gulf of Mexico, meets with the approval of the convention. That the president and secretary are hereby instructed to forward to the Deep-Water Convention at Topeka, Kans., a copy of these resolutions, and that they also furnish a copy to our Delegate in Congress, Hon. J. M. Carey, accompanying the same with the request that our Delegate use his best endeavors to secure the establishment of such a harbor or harbors.

TELEGRAPH.

Telegraph lines are constructed along all railroads, also along the principal traveled roads and stage lines. There are lines between Cheyenne, Fort Russell, and Fort Laramie, between Douglas, Buffalo, and Fort McKinney, and between Rawlins, Lander, and Fort Washakie; also south of Rawlins into Colorado.

TELEPHONES.

Towns of any considerable size are provided with telephone lines. At Cheyenne, the capital, there is a telephone exchange with 200 subscribers, and also an exchange at Laramie, the county seat of Albany

County, and both cities connected. Numerous towns are connected with telephones, and private lines connect many of the large stock ranches with each other and with town, and residences, offices, and business houses are connected with private lines where no exchanges are established.

MAIL ROUTES.

The attention of the Government has frequently been called to the lack of mail facilities in Wyoming Territory, and the necessity of providing better accommodations. There are many places where the mail is carried at the expense of individuals. The mail service does not keep up with the growth of population, and in many ways works a hardship to the pioneer. The settlements are scattered over an area of nearly 100,000 square miles, and the post-offices are necessarily widely separated. The mail service granted a new and growing country should in nowise be measured by its earnings. The receipts in Wyoming during 1888 were as follows:

The total receipts in Wyoming during the last year amounted to \$69,378.07. The receipts from the sale of postage-stamps, stamped envelopes, and postal-cards were \$62,378.97; from box rents, \$7,012.07; and from the sale of waste paper, \$1.25. There was paid to postmasters for compensation \$31,254.71, and for clerks in post-offices, fuel, and rent, \$3,041.61. The letter-carriers received \$1,569.65, and the railway postal clerks, \$477.25.

There are six Presidential post-offices in Wyoming, the aggregate receipts of which are \$36,744.80, and there were one hundred and seventy-three postmasters in the Territory, an increase of twenty-five during the year.

The total number of miles of mail routes was 2,490. Of this the star service takes 1,815 miles.

The decrease in length of star routes was 94 miles, and the increase of railroad service 133 miles.

AGRICULTURAL DEVELOPMENT.

Wyoming is rich in agricultural possibilities, and increased attention is being given farming in all its branches.

In the eastern and northern portions and in some other localities good crops are raised without irrigation, and the area over which this can be successfully done is doubtless widening, but irrigation wherever applied greatly assists, and over a large portion of the Territory is absolutely indispensable.

Surface.—The lands are generally slightly rolling, very accessible, easily broken to plow, and quite free from stones or other obstructions.

The soil.—In the valleys the soil is generally a black loam, in some places a red gypsum, and on the benches, plateaus, and slopes, a sandy loam, usually rich and warm. A great portion of the Territory which looks blank and barren is an alkali soil which produces abundantly after being reduced by the application of water, especially the sage-brush and greasewood wastes.

Climate.—Wherever the altitude is less than 7,500 feet the climate is sufficiently mild and warm to develop crops usually grown in the northern and Western States.

Crops.—Tame grasses, alfalfa, clover, wheat, oats, barley, rye, some corn, potatoes, roots generally, melons, and all garden vegetables, berries, small fruits, etc., are being successfully and very generally

grown; immense crops of hay are gathered, and broom-corn, sorghum, and standard apples of excellent growth and quality have been grown and exhibited at our Territorial and county fairs. The vegetables and grains shown at these fairs are unsurpassed in yield per acre or in size.

New agricultural districts are constantly being brought to public notice. One of the most complete and creditable exhibits displayed at our last Territorial fair came from Salt River Valley. The product was not only grown upon *public* land, but upon *unsurveyed* land.

Markets.—Wyoming should furnish within herself the best markets obtainable for all kinds of agricultural crops. Her mining and stock interests employ many thousand men, her cities and towns will continue to be constant consumers. Stock-raising and farming combined is very successful.

Irrigation.—In view of the facts that more than one-half of the people of the world reside where irrigation is essential in the production of agricultural crops; that 1 acre cultivated under irrigation yields as much as 3 to 5 acres in countries cultivated without irrigation; and that in some countries irrigation is resorted to as a source of fertilization where there is sufficient rain-fall and additional water not necessary, it is very plain we can not over-estimate the importance of this art or the value of water when used for purposes of irrigation.

The success which has attended irrigated farming in the arid region of the United States, and the growing importance of our agricultural interests, has attracted much attention. The extension of the irrigated territory, and the immense extent of country to be reclaimed by the practice of this art, makes it of importance not only to the arid regions, but to the whole nation that there be a wide dissemination of available information on this subject. To this end I submit a fuller discussion of our agricultural resources and their development than would otherwise be necessary.

The great results in individual size and in general yield of crops grown are always reached by the intelligent application of water. Irrigation is more reliable than rain-fall in the production of crops, as the farmer can regulate the moisture according to the necessities of each crop and the soil he wishes to treat. Oats raised in this manner weigh from 38 to 48 pounds to the bushel, where 32 pounds is regarded the regular standard without irrigation, and in other crops a similar result is given. Farmers who become accustomed to irrigation seldom return to farming in localities where irrigation is not practiced.

The water supplies are reliable, as they have their source high up the hills or mountains where living springs abound, and where in most cases the snows of winter are melted during the entire summer.

The water coming down from the mountains and higher plateaus is freighted with fertilizing materials derived from the decaying vegetation and soils of these upper regions, which are spread by the flowing of water over cultivated lands. Reservoirs can be made in the many natural depressions or basins by storing the surplus water during the year, so that small streams used in this way will irrigate large tracts of land.

Wyoming lies almost wholly within the limit of the arid belt and successful agriculture is largely dependent upon irrigation. This is not so much due to insufficient rain or snow-fall as to its unequal distribution. If the moisture of the atmosphere was precipitated uniformly over all the Territory it is possible that irrigation could be dispensed with, but such is not the case. The high mountains, owing to the cold atmosphere, act as great condensers, and clouds in passing

over them are robbed of much of their moisture, leaving but little for the plains below. An area equal to about one-third of the Territory is included in the lofty ranges which form the culmination of the watersheds of our streams.

There is an unfortunate lack of statistics of the annual amount of precipitation on this region but from the best available data the average precipitation equals a layer of water over the entire area from 2 to 3 feet in depth. The greater part of this falls as snow, which melts and passes off during the spring and summer months.

The lands adapted to agriculture vary in elevation from 3,000 to 7,500 feet. Between these elevations is situated nearly two-thirds of the Territory with an average rain-fall of nearly 12 inches. The range at Cheyenne for a period of seventeen years is about 14 inches, the minimum being 5.03 inches in 1876 and the maximum 19.24 inches in 1883. The greatest known rain-fall within the agricultural limits of the Territory is 31.42 inches at Fort Laramie, in 1853. This point has also the minimum record, 2.38 inches in 1860. The experiments of the Territorial engineer and the observation of our most experienced irrigators fixed the average depth of water which must be added to the rain-fall by irrigation, to secure the *greatest* yield, at 2 feet, this being equivalent to a duty of 1 cubic foot per second for 80 acres, reckoning the irrigating season at one hundred days.

We have, therefore, in this Territory the following conditions: There are over 20,000,000 acres of mountains on which water falls each year to a depth of 3 feet. There is an equal or greater area of land so situated along our streams as to be susceptible of irrigation and having the requisite smoothness and slope of surface to permit this to be readily accomplished. The problem of irrigation is to supplement the work of nature and distribute the water falling on the high mountains over these lands. It is not known how great a portion of the water falling on the mountains is lost through evaporation and sinking into under-ground channels, but two-thirds seems a liberal allowance for these losses, which leaves 20,000,000 acre-feet available for irrigation, and this on the duty before mentioned would suffice for the reclamation of over 10,000,000 acres. To reach this result, however, it will be necessary to store up water which now escapes during the winter months and during the early spring floods.

Wyoming differs from nearly all its neighbors of the arid region in the fact that its settlement and development is not the result of mining excitements and discoveries. The chief occupation of her people has been, and is yet, the care and management of the grazing and farming interests. To this fact is due the surprising agricultural development which has taken place within the past decade. Handicapped as the Territory has been by the lack of transportation facilities, the enormous expenditure involved in the construction of irrigation works would not have been met save through the proceeds of the cattle business and the necessity arising therefrom for a winter food-supply for the weaker stock.

As it now stands, Wyoming, although the youngest Territory in the Union, is third in the area of irrigated land and second in the number and mileage of its irrigation canals. A summary of the number, mileage, and capacity of the ditches of the Territory in the different water districts, and the area of land watered therefrom, is given below, being compiled from the records in the office of the Territorial engineer:

Statistics.

Number of streams from which water is diverted for irrigation.....	600
Number of water districts	10
Number of recorded ditches (there are believed to be unrecorded at least 500).....	2,613
Total length as stated.....miles..	4,508
Total number of claims where length is not stated	390
Total capacity as given.....cubic feet per second..	23,109
Number of ditch-claims no capacity given.....	505
Total acreage given as attempted to be watered.....	2,002,736
Number ditch-claims no acreage given.....	623

This table does not include the irrigation statistics of the fourth water district, which are not completed. As it stands, however, it shows an area of farming land greater than the average of the New England States, and an irrigated territory equal to one-half that of Italy and greater than that of France and Spain combined. It is an extraordinary record, when it is remembered that it is largely the work of the past ten years under unfavorable conditions; and it should forever put at rest any doubt as to the ultimate greatness and wealth of Wyoming. If the pioneers of this work can, unaided, produce such results, what may not be accomplished through the intervention of ample capital, or with State or national aid.

Expense of reclaiming land.—A short time previous to the late visit of the United States Senate Committee on Irrigation to Wyoming a circular letter, together with a series of questions to be answered, was sent from the Territorial engineer's office to farmers of known intelligence and practical experience in irrigation in different sections of the Territory asking their views on some of the questions involved in this investigation. The answers are from representative farmers living in every county in the Territory. The letter and questions, together with a synopsis of the replies, are given, as showing the results of actual experience in irrigation development and the views of unbiased and experienced men as to some of the questions on which legislation is proposed.

Name, _____; county, _____; post office, _____.

1. How long have you resided in the Territory? _____.
2. In what year did you begin farming? _____.
3. How much land have you under ditch? _____.
4. If obtained from the Government, state the filings which were made? _____.
5. How many acres are now under cultivation? _____.
6. By what ditch or ditches is it watered? _____.
7. From what stream or streams is water taken? _____.
8. Give history of construction of ditch:
 - (a) Names of owners, _____.
 - (b) Date begun and time occupied in building? _____.
 - (c) Dimensions, _____; length, miles _____; depth, _____; width, _____.
 - (d) How many acres does it water? _____.
 - (e) What was the cost of construction. _____.
 - (f) What is the cost per year for management and repairs? _____.
9. Do you buy or sell water; if so, state price paid or received? _____.
10. Have you all the water needed; if not, state the reason? _____.
11. What is the usual cost of bringing wild land under cultivation? This to include plowing, grubbing sage brush, fencing, etc. _____.
12. How many years' cultivation are required to bring wild land into proper condition for farming? _____.
13. What did it cost you to prove up and obtain title to your land, and what was the length of time required? If any difficulties were encountered, state what they were. _____.
14. What has your cultivated land cost you per acre? This is to include cost of proving up, cost of ditches and laterals, expense of preparing land for cultivation, fencing, and all permanent improvements. _____.
15. What is its present market value per acre? _____.

16. Can you raise crops without irrigation? If so, state what they are and yields obtained. _____.

17. Do you think the present land laws are adapted to the conditions of this Territory? If not, what changes would you suggest? _____.

18. What should be done with grazing land which can not be irrigated? What is its value per acre? _____.

19. How do you regard the withdrawal of all public land from settlement during the irrigation survey? _____.

20. Do you favor the donation of all irrigable public land to the Territory? _____.

Respectfully,

ELWOOD MEAD.

NOTE.—Should the spaces left be insufficient to write reply, write on the accompanying sheet.

From the statements in answer to question 8 (e) the average cost of bringing water over the land was \$4.50 per acre, the highest cost reported being \$12.50 and the least \$1.50 per acre. This variation is due to the difference in the price of labor and material in different sections and to favorable natural conditions or the reverse. The average cost of this work is believed to be near the general average for all the work now completed. The building of larger canals to water greater areas would secure the same result at much less expense, and the tendency now is to construct works of this character.

The average cost of bringing wild land unde cultivation, as stated in reply to question 11, was about \$10 per acre. Twenty-one replies, ranging from \$5 to \$10, four from \$10 to \$15, and three above \$15; two gave no estimates. This is exclusive of the cost of distributing works for water. Together they serve to illustrate the expenses incident to the reclamation of the arid domain under the methods and conditions heretofore prevailing.

Great wealth.—From these statements and the evidence of others well informed on this subject the expense of constructing ditches and distributing works in this Territory does not fall short of \$5 per acre, making the total investment in irrigation works in the Territory at the present time about \$10,000,000, upon which no taxes are assessed, demanded, or paid. The improvements on the land thus watered, together with the outlay made in bringing land into proper conditions for farming, must be nearly as great, so that the total expenditure at present in irrigation works and agricultural improvements is considerably in excess of \$15,000,000, the land itself being taxed only.

The cost of making proof of settlement or reclamation of land was variously stated from \$1 to \$5 per acre. Fourteen answers give from \$2 to \$5, and in two cases of contests it exceeded the latter sum. With the limited number of land offices the cost of making proof of the reclamation of desert lands has in many cases proven a serious and unlooked-for expense to our pioneer farmers, and when this was followed up by the arbitrary withholding of patents that deprived the settler of any security on which to borrow money the evil was aggravated. A number of those making replies are yet denied title, although they have lived on their lands for from five to eleven years.

All replies agree in stating that irrigation is necessary to secure the largest yields in agriculture, and all are agreed in commending the operation of the desert land law, a number adding the statement that reclaiming the land should of itself entitle the settler to possession without the additional payment of money. Opinions as to the proper disposal of grazing lands vary, the majority favoring such action as will enable it to be used in connection with the farming lands along the streams. All favor the donation of the agricultural lands to the State,

if the State will secure reclamation, for the reason that experience has shown the desirability of having both the land and the water under one control if we are to have the fullest utilization of our water supply.

In another part of this report will be found an interesting paper written by Mr. Elwood Mead, Territorial engineer, and presented to the United States Senate Committee on Irrigation.

STORAGE RESERVOIRS.

The action of the national Government in making an appropriation for the examination and survey of reservoir sites has inaugurated a work not only of great value to this section but to the country at large. Of corresponding interest and importance has been the investigation of the United States Senate Committee on Irrigation. From the labors and report of this committee and of the officials of the irrigation survey there will undoubtedly come much new and valuable data as to the methods of irrigation and a wide dissemination of information concerning the resources and possibilities of this section.

It is to be hoped that it will result in such early action by Congress as shall secure the full utilization of the waters of our streams and the retention and use of the waters which now run to waste during the winter months and during the early summer floods. While private enterprise will undoubtedly carry out the work necessary to the full utilization of the average summer flow of our streams, the work of constructing an extensive system of storage basins for holding back the flood waters and the water escaping during the non-irrigating season is an undertaking of great difficulty and involves an outlay which will, except in a few favored localities, prevent the work being undertaken by private business enterprise.

There are sites for such storage basins on nearly every stream and their improvement would result in a very great extension of the cultivated area over what would otherwise be possible. The carrying out of this work on the tributaries of the Mississippi will also be an important aid in preventing the disastrous floods which now menace the country along its banks. The chief beneficiary of this work, therefore, is the State and nation. Since it will bring about an immense increase in its wealth and productive capacity and a perpetual addition to the revenues derived therefrom by taxation, I believe the advantages which will result to the national Government from this undertaking will justify any expenditure it may make in the construction of works, and that the extending of such aid as will result in the fullest utilization of our water supply is the only sound public policy.

TERRITORIAL FAIR.

The Wyoming Territorial fair is annually held in September on the grounds of the Fair Association near Cheyenne. The exhibits are very creditable, especially in live-stock and agricultural products. A score or more of entries are made in nearly all the classes and for each age upon which premiums are offered for horses, cattle, sheep, etc. Fruits, vegetables, grains, and flowers, of wonderful growth and excellent quality, are here shown, disproving entirely the old-time and oft-repeated assertion that this Territory is in the Great American Desert described in the geographies of thirty years ago.

LIVE-STOCK.

The greater portion of Wyoming is admirably adapted to the live-stock industry. Nutritious grasses that cure standing on the ground furnish good grazing both in winter and summer. The great grain-growing States of Nebraska and Kansas are directly on the route of shipment to market, so that live-stock bred and reared on the ranges can be fattened and finished in the cheapest grain country in the world while en route to points of sale.

The Territory employs a competent veterinarian to prevent the spread of contagious diseases among cattle, sheep, and horses, but with the exception of glanders, which is easily stamped out, fatal contagious diseases do not exist. Laws are rigidly enforced for the prevention and extinguishment of disease and to generally protect this great industry.

Previous to 1870 the live-stock industry was of little consequence in Wyoming, and included work stock, milch cows, with perhaps a few bunches of cattle and sheep held by the meat markets for daily slaughter. It was then believed by stockmen, who grazed their herds on the plains south of Wyoming, that the winters were too severe to admit of safely grazing cattle, horses, and sheep on the open range during the entire year, and the occupancy of the large portion of the Territory by Indians at the time deterred the experiment of stock raising.

Cattle.—In 1870 and 1871 several lots of cattle were brought north from Colorado and Texas. It was found that they wintered well, and the succeeding year witnessed the driving in of very large herds from the south and southwest. The Indians having retired, the full possibilities of grazing live-stock in the Territory commenced to dawn upon the herdsmen.

Disease was unknown, the grass grew abundantly, cured excellently, and carried through the winter all classes of live-stock without having to furnish any considerable amount of hay or grain. The transcontinental railway afforded quick transportation eastward, and the freight rates were low compared with the tariff charged on other commodities. As the business grew immense profits were realized; capital came in from all parts of the East and the Old World, and the statement that all a man required in Wyoming to become rich was to own cattle was rarely disputed. The Wyoming Stock Growers' Association, a protective organization, was formed, and the general success of the business was most remarkable. Prices for cattle products rose very rapidly at the Eastern markets for several years, and it became an accepted theory that the population of this country was increasing much faster than horned cattle. The rise in prices of live-stock was maintained, and their numbers increased in Wyoming for more than ten years after the first herds were driven here. Immense numbers of cattle were brought in, breeding herds established, good blood introduced, the animals improved, and, indeed, to many there seemed to be no limit to the success and prosperity of the business.

In 1884 and 1885 there was believed to be 2,000,000 head of cattle in Wyoming, worth, on an average, \$30 per head. The business was still very profitable, but the prices for beef in the Eastern market showed severe decline—a decline that has continued with slight variation until the present. Although the grade of cattle has greatly improved, the price per head has depreciated from 25 to 50 per cent. During the early period mentioned the prevailing transactions of stock cattle were made on book tally without delivery and immense herds were built up, the tendency being towards concentration—fewer herds of larger size and

a general looseness in the conducting of the business. This condition, with occasional severe winters, resulted in great losses to those who invested recklessly or were unfortunately located, and many cattle companies, built upon inflated values and uncertain numbers, collapsed.

I quote the following from my report of 1885:

The business of cattle raising in this Territory can scarcely be longer regarded as in its infancy, nor can the business be called experimental or speculative as to its generalities.

The rearing of cattle in the Territory is to-day as profitable as it ever was, but it has lost much of that speculative "sell and buy without tally, anything and any price to get into the business" buoyancy that has characterized it.

The prices of stock cattle have advanced to a figure where investors, while willing to pay current rates, want to know to a certainty that they are getting what they pay for, as to numbers, grade, and condition of cattle. There is also a growing conviction that this business will not longer "run itself," and that owners must give it, at least, some small percentage of the attention necessary to accomplish success in other industries, and there is also a prevailing disposition to better provide against emergencies, such as the putting up of hay for the weaker ones, the providing of shelter for thoroughbred and fine stock, the separation of bulls from the herd, and special care given them during the winter, etc.

Perhaps the greatest reform is the determination on the part of owners to discontinue the pernicious practice of shipping to market unripe heaves, but, instead, to ship only those of proper age and that are really fat, leaving the younger ones to grow longer on the range, and taking the older ones that are yet lean to the corn-fields of the Missouri Valley for fattening.

Many of our large stock growers have already provided themselves with Eastern feeding grounds and have constructed suitable structures for fattening their beef.

To give an idea of the increase and volume of the Wyoming cattle business, it may be stated that the Union Pacific delivered at Omaha 48,220 head of beef cattle in 1876, increased the number to 121,554 in 1883, and 166,000 in 1884. Since the period above mentioned cattle business in the Territory has changed quite a little. There are more herds, but of smaller size, and greater care is taken to provide shelter and feed for the weaker ones during the occasional storms of winter. The business, so far as the natural increase, healthfulness of stock, favorable winters, good ranges, etc., are concerned, is still very successful, but the extremely low markets prevailing the past two years for cattle products have been a discouraging feature.

While it is claimed the total number of head of cattle in the Territory has diminished, the following figures will give some idea of the magnitude of the business at present:

During the fall of 1888 and the spring of 1889, including the shipments of cattle for one year, there were inspected: Cattle en route to market at the several stock-yards, 343,054 head of Wyoming cattle, with the exception of about 20 per cent. of those inspected at the one point, St. Paul, which were from Montana and Dakota ranges. As but 102,000 were inspected at St. Paul, this would still leave the number of Wyoming cattle inspected during that time upwards of 300,000 head.

Good profits can be made in the cattle business of to-day, if properly conducted; and an encouraging feature of the business is that stockmen are adopting better modes of management. A reasonable increase in price of the cattle product, which is most sure to come soon, will make cattle raising in Wyoming one of the most lucrative industries known anywhere under the head of legitimate pursuits.

The settlement of farmers and grangers upon agricultural lands has caused a division in the area of open country, but there yet remains a wide field for the business, conducted in the open-range way, on the very large tracts that can be used for grazing only, for many years. The lands taken by settlers are being improved by irrigation, tilling,

and fencing, so that the portion withdrawn from the public range will support more live-stock than before.

While the contraction of the open ranges and the decrease in animals handled in the old way has necessarily lessened the cattle industry in Wyoming the last few years, yet it is believed that ultimately stock farming, or the combining of agriculture and stock raising, crops being raised on the streams and arable lands, and live-stock ranging outside on mountain-sides and on the near ranges, will greatly increase the total number of cattle; also the grade, weight, quality, and profits in the Territory until there will be more cattle raised in Wyoming than at any time in the past, the total amount of grass, hay, and grain-growing having largely increased.

Reports issued by the Department of Agriculture in Washington report the number of cattle in Wyoming to be: Milch cows, 8,323, average price, \$36.75 per head; number of oxen and other cattle, 1,107,173, average price, \$19.59. It is my opinion the total number of cattle in Wyoming now will reach 1,500,000 head, the average price being, during the present great depression, about the same as quoted by the Agricultural Department.

The present is a favorable time to invest in the cattle business in Wyoming Territory.

Sheep.—There are probably more than 1,250,000 sheep in Wyoming. The business was later in getting a start than cattle-raising, but is now far beyond the experimental stages, and established on a permanent and paying basis. The low price for wool during the tariff agitation has been discouraging, but confidence is returning with the friendly attitude of woolen manufactories and Congress regarding protective tariff, and there is a steady and growing market for mutton which is doing much for the future development of this industry.

Sheep-husbandry in this Territory requires care and watchfulness to prevent loss from storms, disease, and accident; but with care all conditions are favorable. The only contagious disease is scab, and this is easily cured. The laws of Wyoming provide for county sheep-inspectors to prevent the spread of disease. Foot-rot is unknown, the dryness of the soil acting as a preventive, and will speedily cure without the application of remedies when Eastern sheep are brought here affected with it.

Sheep graze the year round, but when an occasional snow-fall is deep enough to prevent their reaching the ground it is necessary to feed hay. On an average during the past ten years not more than fifteen days of each year has it been necessary to feed hay or grain to strong, healthy sheep. The weaker animals require more nourishment, but in many instances they have done well without hay or other feed than that found on the open range, for several years in succession.

Nearly all the grazing lands in Wyoming are adapted to sheep-growing. The sheep now raised are of good grade and will yield an average per head throughout the flocks of 6 to 8 pounds of wool.

Goats.—There are perhaps 5,000 Angora goats and 1,000 or more common goats in Wyoming. The altitude being about the same as Asia Minor—the home of the Angora—this animal thrives well in the Territory. The mohair fleece brings a higher price per pound than wool, but the animals do not shear so heavily.

Mules.—There seems no good reason why mules should not be extensively bred and raised in Wyoming. The few persons who have engaged in this business have been quite successful.

Swine.—Hogs are raised only for home consumption, but not in suffi-

cient quantities to supply the demand. This branch of stock-raising deserves more attention and will be found to yield good profits.

Horses.—The raising of horses in Wyoming is becoming a very profitable industry, and it is safe to estimate the number in the Territory at 150,000. No class of live stock is as hardy or as free from disease, and the percentage of loss is only nominal. When the snow is deepest horses will paw their way through it until the grass is reached; and in cases where the water is scarce and the distance many miles between streams, they find no difficulty in trotting out far enough from water to obtain fresh range. The pasturage furnishes all the necessary food for growing horses, and as they are able to graze closer to the ground than other live stock, an abundance of food is always assured.

The number of horses in Wyoming is steadily increasing, and the quality being improved by careful breeding. Thoroughbred and standard-bred stallions, many of them imported, are being brought to the Territory in large numbers for breeding purposes. Wyoming race-horses have won laurels the past two years at home and abroad. Draft and driving horses are establishing excellent records in eastern cities, and the time is not far distant when Wyoming horses will be as famous as those of Kentucky, even surpassing them in lung development, sound feet, and power of endurance.

I cheerfully indorse the following, written by Mr. A. S. Mercer, of the *Northwestern Live Stock Journal*, a man thoroughly informed on the subject:

This section is the natural home of the horse and here he is developed in a more perfect and uniform manner than anywhere else on the continent. The altitude and consequent rarity of the air develops a large and healthy lung; the dryness of the atmosphere protects against sudden changes of the thermometer; the sandy, dry, and hard character of the soil gives a foot (a hoof) as hard and durable as iron; the rolling and hilly character of the range over which the horses travel in search of food develops large and hard muscles, and the great healthfulness of the climate gives the best of constitutions. In a word, the nature of the soil and the climatic conditions give wonderful lung capacity, sound feet and legs, with endurance and high courage. And these make the horse. Seventy-five to 90 miles are common drives for double teams in a day over our trackless prairies, with the common ranch horses. What we may reasonably expect from the young crop of improved animals now coming on is so far in advance of our past experience that we hardly dare to name it.

It is safe to say that the time is not far distant when the horses of Wyoming will be as widely known and as generally appreciated as are the record-beaters of California and Kentucky of to-day. To the lover of the horse who contemplates entering into the business of raising good ones there is no other spot in all the broad land offering greater inducements than our Territory. The wonderfully nutritive qualities of our native grasses give a development elsewhere only secured by the feeding of the best varieties of grains. All the conditions are favorable in the highest degree to the most perfect development of the horse.

Long observation has shown beyond any question of doubt that different types of animals are produced by the continued operation of climatic influences. It is well known, for instance, that in low-lying countries, where the soil is wet, the atmosphere heavy with moisture, and the growth of vegetation is rapid, coarse, and rank, animals are produced of large frame, with loose, soft, flabby muscles, poor, flat feet and of weak lung-power. On the other hand, the opposite climatic conditions combine to produce a type of animals exactly the opposite of that just described, *i. e.*, one of compact build, with fine, clean bones, muscles of iron, great lung power, and constitutions that withstand the greatest strain of every day wear and tear.

During the past year Wyoming horses have been shipped to many of the Southern States for breeding purposes.

FISH CULTURE.

While most of the streams and lakes of Wyoming had a natural supply of trout and other food-fish, there were others entirely devoid of fish of any description, and the success attending the stocking of streams containing native fish as well as the barren waters of the Territory has been very gratifying. Under the fostering care of the legislature the fish hatchery at Laramie has been enabled to accomplish the most satisfactory results. The Territory is under obligation to the United States Fish Commission for frequent donation, of valuable varieties of fish. Over a half million fish have been annually distributed in the streams of Wyoming for a number of years, and many streams that were barren have been stocked and found well adapted to the raising of trout and other superior fish. Trout planted in 1885 have been caught the present year that weighed from 3 to 4 pounds, and measuring 20 inches in length each.

The fish hatchery under the direction of the commissioner made a large and very interesting exhibit at the Territorial fair this season of fish grown in Wyoming streams that had been planted from the hatchery. The operations of the commissioner have been considerably curtailed on account of the withholding of Territorial appropriations for improvements that would double the capacity of the hatchery. The hatchery is on what is known as the abandoned Fort Sanders military reservation, 2 miles south of Laramie, and until title can be obtained to this land the Territory is unwilling to make further appropriations. Under the head of military reservations will be found a recommendation urging the opening of this reservation to settlement or sale.

MINING.

The mining industries of Wyoming present perhaps the greatest possibilities of any of its resources. They comprise not only the precious metals, gold and silver, but inexhaustible quantities of coal, petroleum, iron, and soda. Copper, lead, tin, asbestos, mica, magnesium, sulphur, graphite, kaolin, fire-clay, glass-sand, and other valuable deposits exist, and many of them in large deposits. Building-stone is also abundant, including granite, marble, slate, sandstone, limestone, etc. There will be found attached to this report (in Part II) extracts from an interesting and valuable report by Mr. L. D. Ricketts, Territorial geologist, in which the mineral resources of Wyoming are more fully described. Mr. Ricketts has spent the summer in the field, and gives the result of his examination in certain localities. It is shown that the area underlaid with coal exceeds 30,000 square miles, or equal to double the coal area of the great coal State of Pennsylvania. More than 2,000,000 tons of coal are annually mined and the output is being constantly increased. The coal product already exceeds \$5,000,000 annually.

The oil region extends over a country more than 300 miles in length, and in districts averaging 50 by 100 miles in extent. Two hundred thousand dollars are said to have been spent within the past year in developing the petroleum industry. A number of flowing wells have been plugged and only await better transportation facilities.

Gold quartz and placer mines are being profitably worked in several localities, and the mining of copper has also been found profitable; but, with the exception of coal, the mining industries can hardly be said to be developed. Wyoming is a great store-house of mineral wealth, and it will not be many years before it will employ the highest skill of capital and labor. More railroads are needed to assist this development.

FORESTS AND THE PRODUCTION OF LUMBER.

The United States laws prohibiting the manufacture of lumber from forests on the public domain, except for the use of actual settlers, are not calculated to promote the growth of this important branch of industry. It is no doubt a fact that the protection afforded by mill-owners to forests from destruction by fire is greater than the amount of timber which they annually consume in manufacturing lumber. Legislation providing for the leasing of timber lands under certain restrictions would, in my opinion, provide a remedy for many of the existing evils that are now complained of.

Fire is the great destroyer of the forests, and the timber cut and used for all purposes does not perhaps reach 5 per cent. of the total amount consumed by forest fires. The use of timber by settlers, mill-men, and others under proper regulations would in a great measure prevent the spread of the fires which every year devastate such vast areas.

The following is from a report on Wyoming by Mr. Robert C. Morris, compiled for the United States internal commerce report for 1889:

The timber area of Wyoming has been variously estimated from 7,000,000 to 15,000,000 acres, a variation probably owing to the fact that the sparsely-timbered land has been included in the larger estimate. A recent estimate of the forest area of Wyoming, based upon 12,060 square miles, divides as follows:

Counties.	Square miles.	Counties.	Square miles.
Laramie	80	Fremont	3,300
Albany	840	Crook	400
Carbon	1,360	Uinta	2,400
Sweetwater	40	Yellowstone National Park	1,340
Johnson	1,800		

The forests of Wyoming are confined mainly to the mountain ranges between 4,500 and 10,000 feet above the sea level. Some of them are of wide extent, and the timber quite dense and heavy. The best timber is found in the southern part of the Big Horn Mountains, the central portion of the Laramie range, Medicine Bow and Sierra Madre Mountains, and the northern spurs of the Uintah, which extend from Utah into southern Wyoming. The Shoshone, Teton, and Snake River ranges also bear quite heavy forests. The timber upon the eastern extension of the Sweetwater range and western portion of the Rattlesnake Mountains is light and scattered. The widest timbered area is in the northwestern part of the Territory, covering the Wind River, Shoshone, and other mountains of the main range, including the groups of Yellowstone Park.

There is considerable timber, mostly yellow pine, upon the Black Hills near the Dakota line. Measurements of the timber limits of various mountains have been made, which show the heights in their respective altitudes, above which coniferous trees—the hardest of any species—will not grow. The timber line of Mount Washburn is 9,900 feet above sea level, while the altitude of that mountain is 10,388; the timber line of Mount Hayden, of the Teton range, is 11,000 feet, while its altitude is 13,858 feet above the sea level; the timber line of the Wood River range is 10,160, while its general altitude is 11,500 feet above the sea.

Yellow and white pine and white spruce are the principal timber. Many regard the yellow pine as the best and most useful tree, while others think the white spruce furnishes the best timber for all purposes. Lodge pole pine is the prevailing forest tree in a wide area along the mountain range north and south of Laramie. It is also common in the northwestern and other portions of the Territory. It often replaces the original growth after fires. These trees have an average growth from 8 to 12 inches in diameter, but are occasionally found 3 to 4 feet in diameter and 60 to 100 feet in height. Red cedar has a scattering growth along the foot-hills, and at lower elevation the streams are fringed with cottonwood, box-elder, willow, scrub oak, and other small shrubbery.

The forest land of the Rocky Mountains is still largely owned by the General Government, and its preservation is of vital importance. The principal demands upon the

forests are for the manufacture of lumber for local use and for railroad-ties. Also large quantities of smaller timber are used for fencing and fuel. But little if any timber is exported. The consumption of railroad ties has been estimated at 500,000 per annum, and an equal amount is used for timbering the coal mines. The manufacture of charcoal in Uintah County was an important industry for use in the smelters of Utah and Montana until the discovery of coking coal in Colorado on the line of the Rio Grande Railroad several years ago. The native lumber is similar to the Eastern spruce lumber, and is suitable for all ordinary purposes in building except as a finishing lumber. It has too many knots to work smoothly, and the preference is therefore given to Oregon or Eastern lumber. It is estimated that between 30 and 40 per cent. of all lumber used along the line of railroad is imported, and is worth, planed, from \$40 to \$60 per thousand. The native rough lumber is worth from \$15 to \$30 per thousand, according to location. The average price along the railroad is about \$20. In Johnson County, in 1887, there were 9 saw-mills, 3 operating by water-power and 6 by steam, having an average daily capacity of 6,500 feet. The product of those mills in 1887 was 4,856,378 of first-class lumber and 2,381,235 of second-class lumber, 1,994,275 shingles, and 270,810 laths, all of which were used for home consumption. At Buffalo, Johnson County, rough lumber per thousand is worth \$25, dressed flooring per thousand \$35, shingles \$5.50, and laths \$8 per thousand. In Uintah County the product of the saw-mills in 1888 was over 4,000,000 feet of lumber, on an average \$20 per thousand, and 200,000 ties worth \$30,000. Albany County produced an equal amount in 1888, while Crook, Fremont, and Converse Counties produced sufficient to meet all the demands for home consumption.

Little attention has been paid to the cultivation of timber except the native cotton-woods on timber claims; but in all the larger towns experiment has shown, at altitudes not exceeding 6,000 feet, all the hardier varieties of timber raised in the prairie States of Kansas and Nebraska can be successfully cultivated in Wyoming. At Cheyenne, which has an elevation of 6,040 feet, its citizens have been successful in raising, besides the native cotton-woods and box-elder, black walnut, maples, ashes, elms, locusts, apples, and all the hardy varieties of shrubbery. The experience of old residents in Nebraska is being repeated in both Colorado and Wyoming. In 1854, '55 and '56, the first settlers of Nebraska thought that the naked plains could never be transformed into groves of valuable timber. They discovered, however, that on bottom lands along streams, and where prairie fires were kept out, there was a spontaneous growth of valuable varieties of timber—oak, black walnut, elms, ashes, cotton-woods, willows, etc. Still latter it was found by experience that native seedlings transplanted into carefully prepared soil did well on high uplands, out on the open prairie, not only did well, but grew with remarkable vigor and rapidity, showing characteristics of excellence in quality. In time, through acts of the legislature, creating a board of agriculture, and liberal legislative appropriations, keeping out fires, and other aids and precautions, tree planting in Nebraska is conceded a success.

It is estimated that in 1886, there were cut in Wyoming 8,000,000 feet of timber, outside of railroad and mine timber. With the exception of forest fires, it is conceded that no one agency consumes the forest so rapidly as do the railways.

It is important that Congress set aside large forest reservations for the protection of the fountain heads of the great rivers, and the withdrawal from sale, entry, and disposal under existing laws of such lands. The enactment of laws for the protection of forests, and the planting and cultivation of forest trees should be encouraged in the several Territories. When any Territory shall become a State, and shall have instituted good and sufficient forest laws there should be conveyed to such State, in trust, the public forest lands within its borders for the perpetuation of the forests thereon.

EDUCATION.

The United States census of 1880 reports less illiteracy in Wyoming than in any other State or Territory in the Union. Compulsory education is enforced in Wyoming, and a high standard in the management of the public schools has been maintained. The Territory has a general superintendent of public instruction appointed by the governor, and the counties elect biennially a county superintendent. The trustees of each school district are elected annually in the spring for a term of three years by the vote of the poll-tax payers, including women who pay a poll-tax. The term of office of one or more trustees annually expires, so that there are always men of experience on the school board as well as newcomers.

There were 256 teachers employed in Wyoming, exclusive of those

employed in the university, convent, church, and private schools, during the past year, at an average monthly salary of \$58.71. The increase in number of scholars in the public schools in 1888 over 1887 was 1,260, and in the private and other schools there was doubtless a proportionate increase. The Wyoming University at Laramie offers free the benefits of higher education to its students, and good graded schools are supported in all the larger towns and cities. The public schools are gradually assuming a more practical uniformity, with a view of having students prepared to enter the university or other institutions of higher learning. The Catholic Church have under their auspices good schools in several of the larger towns, besides a large convent at Cheyenne. They are doing excellent missionary work among the Indians in Fremont County. The total amount expended in the erection of educational institutions, including the public schools, university, private, and Catholic school buildings, has already reached about \$1,000,000.

SCHOOL LANDS.

Under the United States statutes, sections 16 and 36 of each township are reserved from the public domain for the benefit of the public schools. A subsequent act, approved August 9, 1888, authorizes the Territory to lease the school lands in each county for the building of school-houses and the support of public schools; also the leasing of the university lands for the benefit of the Wyoming University, under rules and regulations approved by the Secretary of the Interior. The Territory has already taken the benefit of this law to some extent, and its school lands are being offered under the following:

RULES AND REGULATIONS FOR THE LEASING OF SCHOOL LANDS IN THE TERRITORY OF WYOMING.

Rule first.—All leases to be until January 1, 1891, no matter at what time the lease is made.

Rule second.—Leases will be divided into two classes, namely, agricultural and grazing, and grazing.

Rule third.—The value of lands to be leased shall be ascertained as set forth in the following blank form of application for lease:

Territory of Wyoming, ——— County.

Post-office of applicant ———.

Date ———, 188 .

To the Honorable Board of County Commissioners of ——— County:

GENTLEMEN: I desire to lease the land described in this application, and I agree to pay the sum of 5 per centum of the value established by the board as annual rental, in advance.

No. of acres.	Subdivision of section.	Section.	Township.	Range.	Price per acre.	Value of improvements.	Name of occupant or owner of improvements.

Applicant will answer briefly the following questions, and the answers will be considered a part of the application.

For what purpose is the land wanted?

Is any person living on the land?

If so, who and how long?

Are there improvements of any description on the land? If so, give name of owner and description of improvements.

State value of same on each Government 40-acre tract, and describe them.

Is there any timber on the land; if so, what kind and quality?

If it can be irrigated, state source and conditions.

If so, how many acres, and on what Government 40-acre tract situated?

Does it contain stock water? If so, give a full description of the same.

Is any portion of it natural hay land?

If so, how many acres, and on what Government 40 acre tract situated?

Describe the general character of the land, locate buildings, fences, and other improvements, with tracings of streams, springs, etc., on section diagram.

If the information given herein shall not be satisfactory to the board of county commissioners, they shall have the right to appoint a board of appraisers, or in any other manner, to ascertain the true value of the land, the expenses accompanying such ascertainment of the true value to be paid by the applicant, who must deposit with the board of county commissioners, with this application, the sum of \$20 to cover such expenses. But in case the information shall be deemed sufficient, then the \$20 shall be refunded, if the applicant shall perfect the lease within thirty days after notice of acceptance of application; but a failure to perfect the lease within the thirty days shall work a forfeiture of the \$20 to the school fund of the county.

Name of applicant _____.

I, _____, do solemnly swear, or affirm, that the answers to questions in foregoing application are true to the best of my knowledge and belief; so help me God.

Subscribed and sworn before me this _____ day of _____, A. D. 188-.

Notary Public.

Rule fourth.—The rental value shall be 5 per centum of the ascertained and appraised value of the lands.

Rule fifth.—The resident or occupant possessing or controlling, in any way, the land to have the preference right to lease at the rental value, which shall be established.

Rule sixth.—In cases where more than one person are settled or living on the section each shall have the preference right to the quarter section subdivision, more or less, on which he is residing prior to January 1, 1889.

Rule seventh.—In cases where legal subdivision lines could not apply in determining prior rights of settlers on any section, or in all cases of conflicting interests on the same, it shall be the duty of the board of county commissioners to act as a board, or appoint three persons, who shall be absolutely disinterested, to act as a board, to settle and define the rights and interests of all the settlers who may desire to lease. The board may require the services of the county surveyor in all such cases, and the decisions of the boards of arbitrators shall be final after filing the proceedings in the office of the county clerk.

Rule eighth.—In case the occupant, resident, or person controlling the land fails, refuses, or neglects to lease, according to the rental value established, then such land shall be placed on the same level with those lands unoccupied or unclaimed by possessory right.

Rule ninth.—Parties claiming possessory rights who fail, neglect, or refuse to lease at the rental value established shall have sixty days to move away and to remove their improvements, consisting of houses, barns, fences, etc.; but all water rights of every description, consisting of dams, reservoirs, ditches, flumes, etc., shall not be disturbed, removed, destroyed, or in any way impaired in value. And in case such person, claiming possessory rights, shall neither lease nor vacate the premises, and give up the land open, free, and untrammelled, but shall continue to use and utilize the same, either directly or indirectly, it shall be the duty of the county board of commissioners to immediately take the proper legal steps to have said party or parties removed from the lands, and compel them to pay the established rental value, with all expenses accruing by reason of such suits, such rental value to be collected for a whole year and not for any fraction of that period—such rental value and expenses to be a lien upon the houses, barns, fences, etc.

Rule tenth.—In case there shall be more than one applicant for the leasing of any of the lands at the established rental value, then the lands shall be subject to lease to the highest bidder, upon due notice by letter to the parties in interest that such public leasing shall take place on the first Tuesday of the succeeding month, at 12 o'clock noon, at the office of the board of commissioners; provided, that notice must be given the parties in interest at least twenty days prior to the public leasing.

Rule eleventh.—It shall be the duty of the respective boards of county commissioners, upon receipt of the rules and regulations for their government in the leasing of the school lands, to immediately advertise in one or more weekly county papers, once each week for four consecutive weeks, that all the school lands in their respective counties will be leased by them upon application; and the board will furnish all nec-

essary blanks. All applications must be filed with the county board on or before 12 o'clock, noon, on the first Tuesday in each month, and be by the board considered and acted upon as soon as the rental value shall have been determined and established, which should be without unnecessary delay thereafter.

Rule twelfth.—It shall be the duty of the respective boards of county commissioners to cause to be printed immediately the rules and regulations governing the leasing of the school lands, and immediately have such rules and regulations conspicuously posted up in at least three prominent places in the court-house; and also to furnish the respective school boards of each school district with at least three copies of such rules and regulations, to be posted up in at least three prominent places in each school district.

Rule thirteenth.—In case any person claiming possessory rights over any school lands shall fail, refuse, or neglect to lease the lands at the established rental value, he shall have the right to sell his improvements to the person leasing such lands within the sixty days given for removing such property. But in case such person, claiming possessory rights, shall neither remove his property nor sell to the party leasing them, it shall be the duty of the board of county commissioners to proceed by law to dispossess said party and collect the annual rental with damages and expenses, such rental value, damages, and expenses to become a lien on the houses, barns, fences, etc., on the lands.

The revenue received from this source will be of great assistance in maintaining the high standard of education already established.

The act of Congress passed August 9, 1888, provides also—

That where lands in the sixteenth and thirty-sixth sections in the Territory of Wyoming are found upon survey to be in the occupancy and covered by the improvements of an actual pre-emption or homestead settler, or where either of them are fractional in quantity, in whole or in part, or wanting because the townships are fractional, or have been, or shall hereafter be, reserved for public purposes, or found to be mineral in character, other lands may be selected by an agent appointed by the governor of the Territory in lieu thereof from the surveyed public lands within the Territory not otherwise legally claimed or appropriated at the time of selection, in accordance with the principles of adjustment prescribed by section twenty-two hundred and seventy-six of the Revised Statutes of the United States, and upon a determination by the Interior Department that a portion of the smallest legal subdivision in a section numbered sixteen or thirty-six in Wyoming is mineral land, such smallest legal subdivision shall be excepted from the reservation for schools, and indemnity allowed for it in its entirety, and such subdivisions, or the portions of them remaining after segregation of the mineral lands or claims, shall be treated as other public lands of the United States.

The Territory has received no benefit as yet from this provision of the act, there being no funds available for the expense of selecting the lands. The Government has received the benefit of the school lands withheld and withdrawn from the Territory on account of their mineral character, settlement by pre-emption, etc., and since Congress has never aided the public schools of Wyoming by any appropriations, I recommend that a sum sufficient to cover all expenses connected with the selection of these lands be appropriated by the next Congress.

University lands.—The act of 1881 grants to certain Territories, including Wyoming, seventy-two sections each of the public lands for the use and support of a university when such Territories shall be admitted as States. The legislature, at its session in 1886, provided for the appointment of a commissioner, and appropriated money for the necessary expense of making a selection under the law. The lands were designated during 1887 and 1888, and the selection duly certified to the General Land Office. Rules and regulations similar to those adopted by the counties for the renting of school lands and approved by the Secretary of the Interior were adopted by the board of trustees of the university.

Numerous applications to rent certain portions of the university lands have been received, but owing to the delay in the General Land Office at Washington to approve the selections made by the commissioners the land can not be rented. A telegram relating to this matter was sent to the Department on the 5th of July last, and on the 17th of

September I addressed a letter on the same subject. No reply has been received, and I presume the matter is under investigation. I trust, however, that it will receive early attention so that the university may profit by the rental of these lands.

LABOR SUPPLY.

The conditions regulating the demand and supply of labor in Wyoming at the present time are about normal. There is, however, a more than usual demand for skilled mechanics and female house-servants.

The total number of Chinese employed in the Territory (largely in the coal mines) will not exceed 500, but they are gradually diminishing each year.

The question of the cost of living and maintaining a family in the Territory as compared with the States east of the Missouri is one frequently asked and worthy of consideration.

Wages are probably 35 to 50 per cent. higher here than in the Middle States, while the cost of living in towns and cities on the railroad is 10 to 20 per cent. greater; in the outlying towns probably 20 to 35 per cent. greater.

I submit herewith a list of approximate current wages in Wyoming.

Occupations.	Wages.	Occupations.	Wages.
Carpenters.....per day..	\$2.50 to \$4.00	Horse wranglers (with board), per month.....	\$20.00 to \$40.00
Machinists.....do.....	3.00 5.00	Farm hands (with board), per month.....	20.00 35.00
Painters.....do.....	2.50 3.50	Sheep herders (with board), per month.....	20.00 35.00
Tinners.....do.....	3.00 3.50	Teamsters (with board), per month.....	20.00 40.00
Stone-cutters.....do.....	3.00 6.00	Cooks (with board), per month..	20.00 50.00
Plasterers.....do.....	2.75 4.00	House servants, men (with board), per month.....	20.00 35.00
Roustabouts.....do.....	1.50 2.00	House servants, women (with board), per month.....	12.00 35.00
Miners.....do.....	2.00 4.00	Railroad brakemen (without board), per month.....	60.00 75.00
Coal miners.....do.....	2.75 5.00	Butchers (with board), per month.....	50.00 75.00
Engineers.....do.....	3.00 4.00	Lumbermen (with board), per month.....	35.00 40.00
Brick-layers.....do.....	4.00 6.00	Conductors.....per month..	75.00 100.00
Shoe-makers.....do.....	2.50 3.50		
Gas-fitters.....do.....	3.00 3.50		
Day laborers.....do.....	2.00 2.50		
Upholsterers.....do.....	2.50 3.50		
Cabinet-makers.....do.....	2.50 3.50		
Plumbers.....do.....	2.50 5.00		
Tailors.....do.....	2.50 3.50		
Bakers.....do.....	2.50 3.00		
Railroad trackmen.....do.....	1.50 2.25		
Cow-boys (with board), per month.....	20.00 35.00		

Cost of living.—The following are about the retail prices, at distributing points in Wyoming, of staple articles:

Flour, first grade, Nebraska.....per cwt..	\$3.50 to \$4.50
Flour, second grade, Nebraska.....do.....	2.75 3.50
Potatoes.....do.....	.75 1.50
Beef.....do.....	6.00 8.00
Mutton.....do.....	6.00 8.00
Veal.....do.....	10.00 12.00
Bacon.....per pound..	.10 .12
Lard, grocer's.....do.....	.10 .12
Chickens.....do.....	.18 .20
Turkeys.....do.....	.18 .25
Wheat.....per cwt..	1.50 1.75
Corn, sacked, Nebraska.....do.....	1.00 1.75
Oats.....do.....	1.00 1.75
Corn meal.....do.....	1.50 2.00
Sugar, granulated.....do.....	8.00 10.00
Salt, Liverpool.....do.....	3.00

Kerosene	per gallon..	\$0. 25	\$0. 40
Coal	per ton..	2. 50	6. 25
Hay:			
In towns	per ton..	9. 00	15. 00
On ranches	do	5. 00	12. 00
Lumber:			
Native, rough	per M..	16. 00	30. 00
First quality, planed	do		40. 00
California or Oregon, best	do	50. 00	60. 00
Shingles:			
Native	per M..	2. 50	3. 00
Oregon cedar	do	4. 00	5. 00
Wood:			
Native pine	per cord		5. 00
Slabs	do		3. 50
Ice	per ton..	6. 00	10. 00

Clothing, dry goods, and other articles easily transported and bearing light freight charges are but slightly higher in price than in Eastern and Middle States.

CONDITION OF THE INDIANS IN THE TERRITORY.

The Shoshone Indian Reservation, comprising 1,520,000 acres, is in Fremont County, and is the only Indian reservation within the Territory. There are at this agency about 1,100 Shoshones and 900 Arapahoes, who have been for a number of years under the care of the Interior Department. They have given little trouble to the Government, probably owing to their isolated position and the proximity of a military post. They still retain their tribal relations. As long as these relations exist the Indians are not likely to understand what it means to be individually responsible to the laws for their acts and be protected in all their rights in the same manner as white men. The means provided by the Government to civilize the Indians, especially in the direction of agricultural pursuits, are very limited, and as a result no great measure of good is being accomplished.

While the development of the Territory is retarded by having this large Indian reservation within its borders, it can hardly be expected that it should be given up without a proper regard for the rights of the Indians. In my report for 1886 I recommended the opening up for settlement of all abandoned military reservations and of the Shoshone Reservation, except so much as might be necessary for the support of the Indians, or a division in severalty among them. I now renew that recommendation. Complaints frequently reach this office that Indians are off their reservations and committing depredations upon live stock and other property. Unless a more strict surveillance is kept over the Indians to prevent their leaving the reservation serious trouble is likely to occur.

Through information recently received from Mr. John Fosher, U. S. Indian agent at the Shoshone Reservation, I learn that there are a few of each tribe away and that the exact number can not be ascertained, but that a very close approximate of those now in the reservation gives:

Sex.	Shoshones.	Arapahoes.
Men	212	215
Women	252	269
Male children	203	233
Female children	174	261

The agent informs me that although no formal allotment of lands in severalty has been made a large number of the Indians have selected land claims, made improvements in the way of houses, fences—and a few have shelter for their live stock—and agricultural implements. They all have ponies, a few cattle, but no work oxen. Some improvement is being made in their horse stock by better breeding. The Shoshones have more cattle than the Arapahoes. As trading among themselves is constantly going on the number owned can not be ascertained.

There are two schools in the reservation, the Wind River boarding-school at the agency, with some forty pupils, and the St. Stephen's Mission Catholic school, about 30 miles northeast of the agency near the junction of the Big Wind River and Big Popo-Agie, with some eighty pupils. The agent reports that the children in both schools make fair progress, some of them learning rapidly, but when they leave school they almost invariably adopt the dress and custom common to their tribe and appear to lose all interest in their studies and the education acquired while at school. They continue to speak the English language very little, although seeming to understand plainly what is said to them in that language.

The sanitary reports of the agency physicians show that for the last few years the deaths on this agency have exceeded the births.

Both tribes on the Shoshone Reservation raise some garden vegetables, grain, and hay. As they must depend very considerably on irrigation the past season has been very unfortunate, on account of drought and great scarcity of running water. Quite a portion of their crops will be lost.

PUBLIC BUILDINGS.

Prior to 1886 there were no public buildings owned by the Territory, and the attention of the ninth legislative assembly was called in that year to the need of more suitable offices for the convenience of the public and the preservation of the public records. It was shown that the various offices of the government were widely distributed in rented buildings, and besides being inconvenient were liable to have their valuable contents destroyed by fire. As a result of this the legislative assembly provided for the erection of a capitol building at Cheyenne, a hospital for the treatment of the insane at Evanston, a university at Laramie, and an institution for the education of deaf and dumb and blind at Cheyenne. Two years later a penitentiary at Rawlins was provided for.

The capitol.—This building is now nearing completion, having been constructed at an expense of over \$275,000. The capitol was designed by a competent architect, and is purely classic in style, bearing a resemblance in general outline to the Capitol at Washington. Its entire length and breadth, exclusive of the broad steps on three sides leading from the building, is 216 by 112 feet. The building is three and a half stories, and the height of the center and wings, from the ground to the roof, is 60 feet. From the central portion of the building rises a lofty dome, 153 feet in height and 30 feet in diameter at its base. At the main entrance is a projection or broad portico, surmounted by two groups of Corinthian columns, above which is a cornice and gable, treated with elaborate ornamentation. The principal material used in the construction of the capitol is a superior quality of sandstone. The new capitol is justly regarded as one of the finest public buildings in the West. It contains about sixty apartments, which afford ample accommodation for all departments of a State government.

University.—The Wyoming University, erected at a cost of over \$100,000, is located at Laramie, and has been in successful operation for nearly two years. Besides being liberally endowed by the legislature by an annual appropriation of over \$16,000, it has received a valuable land grant from the General Government. The university lands, as they are termed, have already been selected by a competent commissioner, and there will be found in this report a recommendation that the Department approve the renting of these lands, in order that the university can secure the benefit that may arise from the rental of the land. The university has an able faculty, and, like the public schools, provides a liberal education free to the youth of both sexes. The university building, which is one of the handsomest structures in the Territory, is constructed of stone. It is four stories in height, 157 feet in length, and 71 feet wide, and is heated by steam and lighted by electricity. The following is quoted from its prospectus:

It is the purpose of the management to make its instruction so full and thorough in the different departments that students leaving at any point will be able to take the corresponding rank in any of the great universities of the country.

Besides the collegiate preparatory department, a present necessity, but to be dispensed with so soon as the high schools of the Territory can be made to do its work, and the departments of the liberal arts, of letters, of philosophy, and of general science, each leading to its appropriate degree, and all of which are now in active operation, there are to be established in succession, and as early as practicable, several practical and professional schools, departments and courses, designed to fit the student for the leading pursuits in life, especially a normal department, a school of mines, an agricultural department, a fully equipped commercial school (excellent work is already being done by an experienced professor in this department), and finally a preparatory school of law.

The instructional force already numbers seven gentlemen doing regular professorial work, and several lecturers, who are under agreement to render services in certain departments, as they may be able, when occasion requires.

Fish hatchery.—The Wyoming fish hatchery is situated about 5 miles east of Laramie City, and is one of the most interesting places to visit in the vicinity. It is conveniently arranged and under excellent management, thousands of trout, salmon, whitefish, bass, and other varieties are hatched and annually distributed throughout the lakes and rivers of Wyoming.

United States penitentiary.—This building is the only institution in Wyoming owned by the General Government. It was erected just outside the limits of the city of Laramie in 1869, at a first cost of about \$40,000, and is under the direction of the United States marshal. It has recently been thoroughly overhauled and enlarged by an expenditure of \$30,000 and is now in excellent condition. The building is of stone and is heated by steam. It will comfortably accommodate one hundred and fifty convicts. There are at present but twelve inmates, the greater part of whom were sentenced here by United States courts in Colorado.

Wyoming penitentiary.—The legislature of 1888 appropriated \$30,000 toward the erection of a Territorial penitentiary at Rawlins, to cost \$100,000 when completed. The building is now being constructed in a very substantial manner of iron and stone.

Poor-farms.—Provision was made by the legislature of 1888 for a Territorial institution for the poor, to cost not exceeding \$25,000, and \$5,000 of the amount was appropriated. A farm has been purchased at Lander, Wyo., but no building erected.

Deaf and dumb and blind.—An asylum for the education of the deaf and dumb and blind has been erected at Cheyenne at a cost of about \$10,000. This institution has not yet been opened.

Insane Asylum.—The Territorial hospital for the treatment of the insane, at Evanston, is a substantial structure of brick and stone, and will comfortably accommodate 50 patients. There has been expended on grounds and buildings about \$75,000. A more extended account of this asylum is made under the head of "dependent and delinquent classes."

Value of Territorial public buildings.—Although Wyoming has a total indebtedness of but \$320,000, her public buildings and grounds have cost about \$500,000, and could not be duplicated for this amount. The grounds upon which they are located have increased in value, and the buildings have been honestly, intelligently, and economically constructed. In nine out of the ten organized counties in Wyoming court-houses and jails have been built of brick, iron, and stone. In Laramie County a very handsome hospital has been erected, and in all counties there are comfortable school-houses. In the cities and towns there are city halls, fire company and other municipal buildings of substantial character.

LEGISLATION.

Wyoming's laws are generally good and applicable to the Territory, its condition and people. They will be found embraced in one volume of the revised statutes of 1887, and in the session laws of 1888.

The Tenth legislature repealed in 1888 the bounty law relating to wild animals, the "Maverick" stock law, the act providing for county stock detectives, and others. The principal laws enacted by the last legislative assembly were as follows:

To provide a more strict observance of the Sabbath.

To create three new counties, Converse, Sheridan, and Natrona (the last not yet organized).

Requiring all private banks to publish sworn statements each quarter regarding their financial condition, and providing penalties for receiving deposits when the bank is in an insolvent condition.

Providing for the organization, control, and management of banking institutions, savings banks, and trust and loan companies.

Providing for the exercise of the right of eminent domain by the railroad companies.

Providing for the reports of Territorial officers.

To protect grazing lands of Wyoming from live-stock in the Territory.

Providing a method for the taxation of live-stock on the open range.

Creating the office of Territorial engineer, and concerning the appropriation of water.

Providing for the release of dower by married women.

To make the mechanics' lien law of Laramie County applicable to all parts of the Territory.

Providing for the bounding of school districts.

Regulating the practice of pharmacy.

Making it a felony to sign any false certificates of acknowledgment or jurat.

Describing lawful fences in the Territory and providing penalties.

Authorizing the governor to designate Arbor day.

Regulating the business of foreign mutual life-insurance companies in the Territory.

Authorizing the semi-annual payment of interest on bonds.

Requiring owners and operators in oil lands to plug their wells before abandonment.

Prohibiting the unauthorized wearing of a Grand Army badge, and using the letters "G. A. R." for business purposes.

A law for the promotion of immigration.

The re-arrangement of the legislative districts and the apportionment of members of the legislature.

An appropriation for the further construction and completion of public buildings.

Regarding liens on personalty.

To increase the powers of boards of county commissioners concerning artesian wells.

To prevent false registration of cattle and false pedigrees.

An act relating to game detectives and protection of game.

An act defining negotiable instruments.

An act making dogs taxable property and providing for their protection.

The following resolutions memorializing Congress, were passed:

Relating to the reclamation of arid lands and the preservation of the forests of Wyoming.

Concerning the control of school and university lands.

Concerning the Fort Bridger military reservation.

Praying for the admission of the Territory as a State.

Congressional legislation needed in Wyoming.—The importance of Congress giving attention to numerous matters in Wyoming is referred to in various parts of this report; but under the head of "recommendations" will be found a résumé of subjects requiring legislation.

UNDEVELOPED RESOURCES.

The resources of this Territory are in a measure undeveloped. The live-stock industry is the oldest, but there remains much unoccupied territory in which to extend this industry, and improved methods in conducting the business are likely to be adopted.

Agriculture is successfully carried on in every county of Wyoming to a limited extent, but with the prospect of more extensive and better modes of irrigation, together with wider railroad facilities, it will become one of the leading industries, and, together with the live-stock industry, will probably rank first in the wealth of the Territory.

With the exception of coal, mining is yet in its infancy. The coal measures cover nearly one-third the entire area and have scarcely been worked more than on the surface. The superior quality of much of the coal gives it a market more than 500 miles east and west of the Territorial lines. This industry will be found fully described under the head of "mineral resources."

Wyoming is an empire in its undeveloped resources, and only awaits the advent of capital and well-directed labor to make it one of the great States.

SOCIAL PROGRESS.

The formation and establishment of a new Territory always draw within its borders heterogeneous elements. This was true in the history of Wyoming. Some of its towns had unsavory reputations during the time of the construction of the Union Pacific Railroad and the first settlement of mining districts, but the rough element passed on, and a cultivated and enterprising class of young men, desiring to carve out a future for themselves, came to the Territory from the Eastern, Southern, and Middle States. These men had courage, muscle, and brain, and they gave life and business activity to the many industrial pursuits. The most of these men came unmarried, and, after becoming fairly settled in some remunerative employment or business, returned to their old homes and married, bringing wives from cultivated and refined circles, thus laying the foundation for Wyoming, which has insured a society that will compare favorably with any section of the United States in cultivation, refinement, hospitality, and all that goes with a high type of manhood and womanhood. The present inhabitants of Wyoming are homogeneous, distinctively American, and very energetic.

Woman's suffrage.—The first legislative assembly of Wyoming in 1869 conferred upon women the right to vote, recognizing the principle that "equality is a natural right." Two years later there was an attempt made to repeal the law, but without success, and no effort has

since been made to repeal or abridge the right of suffrage. No one will deny that woman's influence in voting has always been on the side of good government. The people favor its continuance, and it is not regarded as a matter of difference between political parties. The constitutional convention, composed of men from both parties, adopted almost unanimously the following provision :

The right of citizens of the State of Wyoming to vote and hold office shall not be denied or abridged on account of sex. Both male and female citizens shall enjoy all civil, political, and religious rights and privileges.

Religious matters.—Churches in Wyoming are very numerous. All towns of any considerable size are represented by one or more denominations and generally by all the prominent religious societies. There are many handsome and costly church structures.

Wyoming forms a diocese of the Catholic Church under the supervision of Bishop Burke at Cheyenne, and Wyoming and Idaho a diocese of the Episcopal Church presided over by Bishop Talbot, with residence at Laramie City. Time and space will not permit of a general description of the churches or church edifices throughout Wyoming, but I will extract a few brief items from the church statistics of Cheyenne as an example. What is true of Cheyenne will apply to other districts and towns. I am able to submit some points relating to the Catholic Church throughout the entire Territory.

St. Mark's Protestant Episcopal Church.—Organized in January, 1868. The 14th of July following a church edifice was commenced ; and August 23 following the structure was finished, at a cost of \$4,000, free of debt. St. Mark's rectory was begun July 6, 1869, and was finished the same year, the cost being \$5,000. The holy communion was first celebrated March 1, 1868, with five communicants.

Since the organization the parish has had eleven rectors ; the present rector is Rev. George C. Rafter. An imposing and commodious stone church building has recently been erected on a convenient site, at a cost of about \$30,000. It is furnished with handsome, upholstered pews, is lighted with gas, has an organ valued at \$2,500, and seats about 300.

First Congregational Church.—Organized June 13, 1869. Pastors, 1869 to 1871, Rev. J. D. Davis ; 1871 to 1873, Rev. Josiah Strong ; 1873 to 1875, no pastor ; Rev. C. M. Sanders commenced in August, 1875, and remained as pastor until November, 1887. Rev. A. W. Williams was called in December, 1887, and is the present pastor of the church. The first church building was dedicated November 14, 1869, and cost about \$4,000 ; the second church building was dedicated March 12, 1884, and cost over \$25,000. It is a beautiful brick edifice with all modern improvements, such as furnace for heating, incandescent electric lights, commodious parlors, lecture-room, library, and pastor's study. The present membership is about 175. It has a flourishing Sabbath-school with an average attendance of 125. The church owns a pastor's residence on grounds adjoining.

Second Congregational Church.—This church, organized by a few members of the First Church, is situated south of the Union Pacific Railroad, in South Cheyenne. It has a membership of 27, and Sabbath-school of 50 members. When the railroad machine-shops are completed and manned, the church will have a very important and useful field of labor. Rev. A. W. Williams is at present the acting pastor of this church. With increase of population the church will call a minister who can give his whole time to the work.

First Presbyterian Church.—The church building is a large brick

structure with stone trimmings. It has a fine pipe-organ for the main room, and a piano for the parlors. It is handsomely frescoed, and has 300 opera chairs, of the latest pattern, for seating its congregation. The church has good heating-furnaces, is lighted with gas, and the estimated value of its property is \$30,000. The general condition of the church is very prosperous, with a membership of 140; children in the Sabbath-school, 140. Rev. Richard E. Field, the present pastor, took charge in January, 1885. The annual contributions for current expenses and benevolent purposes average about \$5,000. The church also owns a neat two-story parsonage, constructed of brick.

Methodist Episcopal Church.—This church was organized in 1869 by Rev. Mr. Scott. The first building erected for church purposes was 36 by 54 feet in size. This building, although a very good one for the time in which it was erected, will be replaced very soon by a handsome brick structure, 56 by 80 feet in size, with lecture-room, class-rooms, parlors, etc. The brick parsonage, adjoining the church, is a comfortable residence, and cost about \$2,500. The church membership at present is 164, and there are 200 names on the Sunday-school roll. Rev. S. A. Bright is the present pastor. The estimated value of the church property is \$12,500.

First Baptist Church.—The First Baptist Church of Cheyenne was organized September 21, 1877, under the missionary efforts of Rev. D. J. Pierce, and the successive incumbents have been, respectively, Rev. William H. Young, D. D., Rev. A. B. Banks, Rev. George Brown, Rev. Samuel J. Nunn, and the present pastor, Rev. L. D. Lamkin. This body worship in a commodious brick structure, which is fitted with steam-heating apparatus and electric-light appliances. The church is now in a flourishing condition. The Sunday-school is maintained with lively interest, as well as the missionary and outside work of the denomination.

Second Baptist Church.—This church is at present without a pastor, but services are held at irregular intervals. The church property is valued at \$2,500.

African Methodist Episcopal Church.—This church was organized in 1876 with very few members, but has increased and now has a membership of 30, with an average congregation of about 50. The estimated value of the church property is \$4,000 and consists of a brick church and parsonage. The annual expenses of the church are about \$800, with an annual contribution to missions of over \$50. Rev. S. W. Bird is the present pastor.

Scandinavian Church.—This denomination has recently erected and finished a building, is supplied with a pastor, and holds regular services.

Catholic Church.—The Catholic Church in the Territory is in a very prosperous condition both financially and numerically. It owns much valuable church, school, and cemetery property. It has 27 missions or congregations which are visited occasionally and 12 which are regularly attended. The educational institutions include two academies for young ladies, conducted by the Sisters of the Holy Child Jesus, and two parochial schools. The Sisters of Charity conduct a school for the Indians and a hospital, and all of these institutions are well attended. The Territorial boundaries are also the boundaries of the Catholic diocese of Cheyenne. Cheyenne is the cathedral city. The bishop, Rt. Rev. M. F. Burke, resides here and has two assistants, priests, to aid him in the management of the diocese and cathedral congregations. There are eight additional priests in Wyoming. The largest congrega-

tion is at Cheyenne. The cathedral parish has about 450 families, in all about 2,500 souls. Laramie City has a little more than half this number. Altogether the Catholic Church in Wyoming is active, progressive, and firmly established. It fully realizes that Wyoming is a promising field for future missionary work.

Young Men's Christian Association of Cheyenne.—Incorporated 1887. Present officers: W. N. Hunt, president; J. W. Lacey, vice-president; S. B. Tuttle, secretary; G. F. Rossire, treasurer. Has reading room with all Territorial papers on file; also prominent magazines and newspapers of the larger cities of the United States. It has fine gymnasium apparatus, but the gymnasium is now temporarily closed. About 50 active members now on rolls. Regular religious services are held at 4 o'clock p. m. Sundays.

Societies.—Wyoming contains many fraternal, charitable, literary, dramatic, and other societies usually represented in older countries, and all are flourishing. Among them are Masons, Odd Fellows, Knights of Pythias, Grand Army of the Republic, library associations (with many good libraries), Irish and benevolent societies, Good Templars, bicycle clubs, social and business clubs, and many others.

LIBRARIES.

The Territorial library, which contained about 6,000 books in 1882, now has over 14,000 volumes, exclusive of the public laws and documents of the Territory. Constant acquisitions are being made to the library by the purchase of valuable law books from appropriations made by the legislature and by donations.

The law providing for the establishment of county libraries, by levying a special tax of not less than one-eighth nor more than one-half mill for that purpose, has been taken advantage of by several counties, and the opportunities which they afford are highly appreciated by the public. In Cheyenne the Laramie County library contains more than 2,000 volumes, and 500 persons draw books regularly.

Nearly all the churches have libraries, and the district schools under the law are also provided with excellent libraries. The good work which these libraries accomplish can not be overestimated.

INDUSTRIAL PROGRESS.

The broad plains and mountain ranges of Wyoming invite the profitable investment of millions of dollars in mining, agriculture, stock-raising, and other pursuits. The resources of the Territory are mentioned elsewhere in this report, but neither the time allotted nor the space permitted for an annual report will enable justice to be done to the great undeveloped resources of the Territory, and future State, of Wyoming. From a perusal of the pages of this report referring to the industries of the Territory some idea may be had of the progress already made. Commencing a score of years ago with but a handful of men in all this broad land with a total valuation of but a few thousand dollars, the Territory now presents a commonwealth with a population of 100,000 and an *actual* valuation probably exceeding \$100,000,000. But the development already accomplished is only a mere indication of the future. It is not more than enough to show in a measure the flattering prospects, and illustrates that here all industrial enterprises are yet in their infancy.

THE WYOMING PRESS.

The newspapers of Wyoming number 31. Four of the number are dailies, 3 of them publishing both daily and weekly editions, 12 of the number receiving the Associated Press reports. There is 1 semi-weekly, 1 monthly; the remaining 25 are weekly journals. One is a live-stock, paper; 1 church paper, and the others are devoted to general Territorial and local interests.

The following is the list of those now published in the Territory :

Paper.	Editions.	Post-office.	County.
Cheyenne Sun.....	Daily and weekly..	Cheyenne	Laramie.
Cheyenne Leader	do	do	Do.
Daily Tribune.....	Daily	do	Do.
Northwestern Live Stock Journal	Weekly	do	Do.
The Boomerang	Daily and weekly..	Laramie City	Albany.
The Sentinel	Weekly	do	Do.
Laramie Weekly Times	do	do	Do.
Wyoming and Idaho Mission	Monthly	do	Do.
The Carbon County Journal	Weekly	Rawlins	Carbon.
Casper Weekly Mail	do	Casper	Do.
Platte Valley Lyre	do	Saratoga	Do.
Bessemer Journal	do	Bessemer	Do.
Sweetwater Chief	do	Bothwell	Do.
Rock Springs Independent	do	Rock Springs	Sweetwater.
The Miner	do	do	Do.
The Uinta Chieftain	do	Evanston	Uinta.
Evanston News	do	do	Do.
Buffalo Echo	do	Buffalo	Johnson.
Big Horn Sentinel	do	do	Do.
The Rustler	do	Bonanza	Do.
The Sundance Gazette	do	Sundance	Crook.
The Wyoming Farmer	do	do	Do.
The Newcastle Journal	do	Newcastle	Do.
The Mountaineer	Semi-weekly	Lander	Fremont.
The Fremont Clipper	Weekly	do	Do.
Douglas Republican	do	Douglas	Converse.
Bill Barlow's Budget	do	do	Do.
Lusk Herald	do	Lusk	Do.
Glenrock Graphic	do	Glenrock	Do.
Sheridan Post	do	Sheridan	Sheridan.
Sheridan Enterprise	do	do	Do.

MILITIA.

The Wyoming National Guards, Company A, of Laramie, and Company B, of Cheyenne, have been organized under United States laws governing militia. Each company has about 50 men, fully equipped, and they are excellently trained, disciplined, and drilled.

IMMIGRATION.

The necessity of attracting immigration to Wyoming was recognized by the legislative assembly in 1888, and an appropriation made of \$2,500, to be expended under the direction of the secretary of Wyoming. A very commendable report describing the general resources of the Territory was issued, and its distribution has no doubt attracted the favorable consideration of both capital and labor. There has, however, been no settled policy adopted by the Territory to promote immigration, but there is a growing interest on the part of railroads and colonization companies to settle up the country. The great railroad corporations have made liberal offers and provided exceptional advantages and rates to settlers to locate in many of the Western States, and similar advantages are anticipated for Wyoming when the Union Pacific, Burlington, and Northwestern Systems have further extended their lines throughout the Territory.

Foreign population.—The distribution of the immigrants among the States and Territories is of interest, but no reliable information on this subject can be obtained. The census of next year will probably show a percentage in nationality quite similar to the other Northwestern States and Territories. The alien population would probably rank in numbers in the following order: Germans, Irish, Swedes and Norwegians, English, Scotch, and Finlanders. There are about 500 Chinese employed in coal mining and other industries.

DEPENDENT AND DELINQUENT CLASSES.

The Wyoming laws relating to dependent classes are such as to meet only the wants of a new community, the general system being one of temporary relief. We have no poor-houses or resident pauper class, and such as become a charge on the counties are afforded temporary aid either at home or in the hospitals, while many are furnished the means to return to their friends in other States or Territories. The law governing the poor and paupers makes the following provisions: The board of county commissioners of each county are vested with entire and exclusive superintendence of the poor in their respective counties, and may make a contract for the necessary maintenance of the poor in such cases, or may appoint agents to provide for the same.

The board of county commissioners of any county also have the power, if they deem it best for the interests of the county, to cause to be built in their respective counties work-houses for the accommodation and employment of such persons as may from time to time become a county charge, and such work-houses shall be under such rules and regulations as the county commissioners may deem just and proper. With the exception of a hospital for the accommodation of the poor, the sick, and the infirm of Laramie County, at Cheyenne, there have been no poor-houses built at county expense. The care and maintenance of the pauper insane has been a charge upon the respective counties, and for a number of years they have been kept at a private asylum in Jacksonville, Ill., at an expense of about \$25 per month. An asylum for the support and care of the insane was provided for by the legislative assembly of 1886, and by appropriations then and since made of over \$60,000 a building has been erected at Evanston, Uinta County. The building commission having secured a gift of 160 acres of land, built thereon the central portion of the building and a wing with a view of completing at some future time. The hospital, which is on the American plan, is constructed of brick and stone with two stories and a mansard roof above the basement, and when the wings are completed will have accommodation for one hundred patients. The legislature of 1888 provided for heating apparatus and furnishing the building, and in April last the hospital was opened for the reception of patients.

The institution has now between fifteen and twenty inmates, the greater part of whom were transferred from Illinois. The hospital will compare favorably with institutions in other States that have been erected with a view to comfort and economy. It is provided with steam heat, electric-light, and other conveniences. A board of three commissioners, appointed by the governor, have entire direction of the institution, and appoint the superintendent, who employs all help needed in the asylum, subject to the approval of the board of commissioners. The law provides that paying patients whose friends offer and will pay, or who have property to pay their expenses, shall be admitted to the asy-

lum according to the terms directed by the board of commissioners thereof; but the insane poor shall in all respects receive the same medical care and treatment as the paying patients.

The board of penitentiary commissioners, composed of three members appointed by the governor, are authorized by law to make contracts to provide for Territorial prisoners. Under this law, pending the completion of the Wyoming penitentiary building, all prisoners sentenced by the courts of Wyoming for more than one year are sent to the Illinois State prison at Joliet, where they are kept for 25 cents a day. Previous to the abolishment of contract system at Joliet the convicts of Wyoming were maintained there for their labor, the only tax being for transportation and the usual fee of \$5 given on discharge from prison. The amount appropriated for the transportation and maintenance of prisoners for the two years ending March 31, 1890, was \$20,000; for juvenile delinquents, \$6,000; and contingent expenses of penitentiary commission, \$2,500. The average number of Wyoming convicts at Joliet during the year 1888 was about one hundred.

The legislature of 1888 appropriated \$30,000 toward the erection of a Territorial penitentiary at Rawlins, Wyo., to cost \$100,000 when completed. This building is now under construction.

It is lawful for any judge of the probate court of any county in the Territory to commit to the care, custody, and guardianship of the house of refuge of any State where provision has been made, any child or children, under the age of sixteen years, who are disobedient or uncontrollable, or who have been convicted of certain offenses specified in the law. Under this provision twelve or fifteen juvenile delinquents have been annually kept at the reform school at Golden, Colo., an excellently managed institution, where they have received the benefits of an education, besides being taught some useful trade.

There are ten organized counties in the Territory, and with one exception they are all provided with fine court-houses, built of brick, iron, and stone, that have cost from \$30,000 to \$50,000 each. Substantial jails have also been provided, and, as a rule, the prisoners are well cared for, no serious complaint having been made for several years.

An institution for the education of the deaf, dumb, and blind was erected at Cheyenne at a cost of \$10,000 in 1887. The proviso that the institute should not be opened until there were twelve pupils ready to enter the school has delayed its organization.

Convicts.—The United States penitentiary at Laramie, which is for the imprisonment of United States prisoners only, has twelve inmates at the present time. A Territorial penitentiary is in process of construction at Rawlins. For a number of years all persons convicted of felonies against the Territory of Wyoming have been sentenced to the State penitentiary at Joliet, Ill. The following communication in regard to Wyoming prisoners is from the chairman of the penitentiary commissioners:

SEPTEMBER 25, 1889.

SIR: Agreeably with your request of this date, I have the honor to submit the following report of the Territorial convicts now in confinement in various penitentiaries abroad, under and by virtue of existing contracts between the authorities thereof and this board of commissioners:

In confinement at Joliet, Ill.....	80
In confinement at Lincoln, Nebr.....	1
In confinement at Jacksonville, Ill., Oak Lawn Retreat for Insane.....	2
In confinement at Golden, Colo., juvenile delinquents	7

Total 90

The various places of confinement cited above have during the current year been visited and inspected by a representative of this board and the condition of the Territorial convicts found to be satisfactory in every particular.

Yours, respectfully,

T. DYER,
Chairman.

HON. FRANCIS E. WARREN,
Governor, Wyoming Territory.

Pardons.—Prisoners of exceptionally good conduct and those of extreme youth or in failing health have in some cases been pardoned on proper recommendation, and others have been restored to citizenship upon expiration of their sentence.

THE CLIMATE OF WYOMING.

Wyoming has superior climatic advantages. Remote from the sea-coast and large bodies of water, there is but little fog or rain, and the general prevalence of sunshine renders the atmosphere dry, rare, and clear. Cloudy days are the exception. Objects are seen at great distances, and the atmospheric influence on the human system is bracing and healthful. The following tables illustrate Wyoming's climatic conditions as compared with other localities:

Stations.	Elevation.	Means.				Atmosphere—1886.		
		Barometer (ten years).	Relative humidity (four years).	Precipitation (ten years).	Temperature (ten years).	Clear.	Fair.	Cloudy.
	<i>Feet.</i>	<i>°</i>	<i>°</i>	<i>Inches.</i>	<i>°</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>
Augusta, Ga.....	183	30.140	69.2	48.98	640.2	130	152	79
Jacksonville, Fla..	43	30.030	69.0	55.94	690.2	102	176	87
Boston, Mass.....	142	29.840	68.5	49.47	480.5	131	145	88
Newport, R. I.....	34	29.950	74.3	50.20	500.3	-----	-----	-----
New York, N. Y....	164	29.837	70.2	42.70	510.3	124	168	73
Philadelphia, Pa..	52	30.084	68.8	41.89	520.2	109	188	68
Chicago, Ill.....	661	29.317	69.2	35.47	490.3	99	173	93
St. Paul, Minn....	811	29.133	67.3	29.59	430.9	102	178	85
Denver, Colo.....	5294	24.778	45.8	14.77	490.1	147	160	57
Santa Fe, N. M....	7046	23.263	41.4	14.17	480.5	139	194	32
Salt Lake, Utah...	4348	25.644	40.3	17.52	510.8	129	159	75
Los Angeles, Cal..	350	29.647	65.8	18.97	590.8	181	145	38
Cheyenne, Wyo...	6105	24.004	59.0	11.32	14.0	143	179	42

The following is the average temperature for June, July, and August during the past sixteen years, as obtained from the Signal Service Office:

Year.	Temperature.	Year.	Temperature.	Year.	Temperature.
	<i>°</i>		<i>°</i>		<i>°</i>
1872.....	62.5	1878.....	64.3	1883.....	61.6
1873.....	66.7	1879.....	65.5	1884.....	62.6
1874.....	67.2	1880.....	63.0	1885.....	63.3
1875.....	62.6	1881.....	67.6	1886.....	64.9
1876.....	65.0	1882.....	62.7	1887.....	64.1
1877.....	64.2				

To show the comparative condition of health in Wyoming with other places, the following medical statistics of the U. S. Army are submitted. The troops of the United States are, perhaps more nearly than any

other class of persons, subjected to the same surroundings and conditions, and their habits are uniformly the same.

Localities by States and Territories.	Average No. of troops per year stationed in each locality.	Average No. per year treated in hospital for disease.	Average No. per year died from disease.	Ratio to 1,000 of mean strength.	
				Treated each year for disease.	Died each year from disease.
Atlantic coast, New York to Maine	841. 21	486. 99	15. 00	1, 768. 10	17. 23
Arizona	1, 168. 32	2, 481. 15	14. 15	1, 124. 14	12. 11
New Mexico	954. 79	76. 02	7. 42	1, 231. 70	7. 77
California and Nevada	1, 393. 24	2, 212. 60	9. 60	1, 587. 62	6. 88
Pennsylvania, Indiana, and Michigan ..	438. 25	561. 75	2. 65	1, 282. 53	6. 05
Montana	622. 74	720. 90	3. 50	1, 157. 62	5. 62
Dakota	2, 004. 37	2, 453. 35	9. 55	1, 224. 06	4. 76
Wyoming	1, 919. 10	2, 406. 24	9. 05	1, 253. 77	4. 71
Oregon, Washington, and Idaho	730. 55	074. 60	3. 40	1, 471. 23	4. 66

A complete table, giving rain-fall and general weather statistics, will be found in this report.

CIVIC DIVISIONS.

The counties.—Wyoming, when organized in 1869, contained two counties (formerly under the territorial jurisdiction of Dakota), Laramie, and Carter.

At the present time the Territory is divided into ten counties, as follows:

Counties.	Organized.	Length.	Width.	Area, omit- ting fra- ctions.
		<i>Miles.</i>	<i>Miles.</i>	<i>Acres.</i>
Laramie	December, 1869	108	65	4, 520, 480
Albany	do	99	45	3, 057, 920
Carbon	do	108	72	4, 976, 640
Sweetwater	do	110	84	5, 913, 600
Uintah	do	275	55	9, 680, 200
Johnson	December, 1879	103	100	6, 624, 000
Fremont	March, 1884	192	105	12, 942, 400
Crook	January, 1885	103	100	6, 624, 000
Converse	January, 1887	108	70	4, 850, 000
Sheridan	do	100	30	1, 920, 000

Under the head of each county will be found a description of its general resources and of the principal centers of trade. The valuation of taxable property and its classification in these counties will be found in the tables forming a part of this report.

ALBANY COUNTY.

This county contains an area of 4,450 square miles. Nearly 2,000,000 acres of this amount are on the Laramie plains, with an altitude of from 6,000 to 7,000 feet.

A large portion of the land is adapted to agriculture. Very large crops of hay are annually provided, and oats, vegetables, etc., are successfully cultivated. Nearly the entire county affords fine grazing. The hills and high mountains surrounding the plains furnish an abundant supply of water, the principal streams being the Big and Little Laramie Rivers and their tributaries.

Albany County is one of the most progressive and prosperous in the territory.

Several large soda lakes are situated on the Laramie plains, covering hundreds of acres, and having deposits of soda from 10 to 40 feet in thickness. A large section of country is underlaid with coal and iron, and in the mountains are found numerous gold and silver mines, both lode and placer, some of which have been profitably worked. Plumbago, asbestos, kaolin, mica, etc., have been discovered within the county, and marble of excellent quality and many other varieties of superior building stone.

The surrounding mountains are heavily timbered, furnishing an abundance of lumber.

City of Laramie.—The principal trade center in Albany County is Laramie, the county seat. Its location has many natural advantages, and is perhaps the handsomest in the Territory. Laramie was first settled in 1868 during the construction of the Union Pacific Railway, but at the present time has a population of about 6,000. It is a supply point for ranchmen, miners, and the important railroad and manufacturing interests that have been located there. Extensive machine shops, employing several hundred men, are in operation; also a large rolling-mill, a burnetizing establishment for the treatment of railroad ties, and chemical works for refining and preparation of the natural soda for market. Laramie has a flouring mill, glass works for the manufacture of window glass, tannery, soap works, planing-mill, and numerous other enterprises. The Wyoming University, in which the citizens of Laramie take great delight, is located here; a private school and hospital under the care of Sisters of Charity. There is a substantial county courthouse and jail, constructed of brick and stone, and fine school buildings, churches, residences, and business establishments. The city has one daily and three weekly newspapers and a religious monthly, three national banks, water and sewerage systems, electric light, telephone exchange, opera house, fine buildings erected by various fraternal societies, etc. Laramie is the home of the Episcopal bishop for Wyoming and Idaho. The territorial fish hatchery is within 5 miles of the city, and the United States penitentiary a half mile outside the city limits. Laramie, with many natural advantages, has a brilliant future.

CARBON COUNTY.

Bordering on Colorado, and situated in the center of the southern portion of the Territory, this county has an area of about 7,775 square miles. The principal business now carried on in the county is stock raising and coal mining. There are also extensive quarries of building stone successfully worked, and gold and silver is mined a little in some parts of the county. Iron ore exists in immense quantities, and very excellent mineral paint has been largely manufactured here. Owing to its superior quality as preservative of iron against rust, it has been used for painting the Brooklyn Bridge and elevated railway systems of New York. An analysis shows the following composition:

	Per cent.
Iron peroxide.....	90.2
Sulphur and lime	1.4
Insoluble matter.....	7.2
Water.....	1.2
Total.....	100.0

Sheep-growing receives much attention and is very successfully prosecuted. Nearly one-fourth of a million of sheep were sheared in 1889, averaging about $8\frac{1}{2}$ pounds of wool per head. The sheep are of large size, healthy, and keep in splendid flesh the year round with no other feed than obtained in grazing.

The beautiful sandstone from which the Wyoming capitol building is constructed came from the Carbon County quarry, situated 2 miles from Rawlins.

City of Rawlins.—This city is on the Union Pacific Railroad, and is the county seat of Carbon County. Its altitude is about 7,000 feet. It is a short distance off the crest of the continental divide, where it is crossed by the Union Pacific. Rawlins has a population of between 2,000 and 3,000, is the terminus of the east and west mountain divisions of the railroad, and has round houses and quite extensive machine shops, employing a large number of men. Rawlins is quite a distributing point, having trade with the outlying country a distance of about 200 miles north and south of the railroad. Daily and tri-weekly mail stages leave here for northern and southern points. The Territorial penitentiary, to cost \$100,000 when finished, is being constructed here, and the public school houses of the county and city are substantial and handsome buildings. The court-house, erected of stone, cost nearly \$50,000, a public school house \$35,000, and one of the fine business blocks has been erected at an outlay of over \$50,000. There are many other substantial business houses, besides residences, several churches, opera-house, etc. Rawlins has a weekly newspaper and one banking institution.

Carbon County has several other towns of considerable size. The town of Carbon, with a population of perhaps 2,000, is almost exclusively a coal-mining district. Dana and Hanna are new coal-mining places, and, on account of the superior quality of that product, they are likely to outgrow Carbon. The new town of Casper is in the northeastern part of the county at the present terminus of the Wyoming Central and on the North Platte River. It is surrounded by a fine grazing country, the center of an extensive oil basin and numerous soda lakes. The town, which is less than two years old, has several large mercantile establishments, a bank, and weekly newspaper. Freight in large quantities is shipped from Casper to Lander and Fort Washakie.

Saratoga, so called on account of its hot sulphur springs, which possess rare medicinal qualities for rheumatism and kindred diseases, is in the southern part of the county, on the banks of the North Platte River. It is in the center of a good agricultural valley, with abundance of timber and mineral prospects in the surrounding mountains. A weekly newspaper is published here.

The towns of Bothwell and Bessemer, in this county, each have a weekly newspaper.

An enabling act, providing for the organization of the proposed county of Natrona, will include nearly one-half of the northern part of the present county of Carbon.

CONVERSE COUNTY.

Converse County has an area of about 7,000 square miles, and, though organized less than two years ago, has an assessment roll of over \$2,000,000. The Wyoming Central Railroad traverses its entire length from east to west, and the Cheyenne and Northern, now under construction, will pass through from south to north. The North Platte

River, with its many tributaries, flows through the central portion of the county, and will furnish water to irrigate a very considerable portion of the county. Stock-raising is extensively carried on, also coal-mining, a great portion of the area being underlaid with coal. Much of the county is well adapted to agriculture, on account of its low elevation and abundant water supply. This industry is but little developed. Large deposits of iron ore, assaying from 60 to 70 per cent., and metallic iron are found in this county, and the Laramie Range has many excellent prospects, which assay in gold and silver from \$65 to \$250 per ton. Copper is also found accompanying gold and silver. Marble, limestone, gypsum, mica, glass sand, and potter's clay are also among its mineral resources. Pine timber is found in the hills and mountains, supplying native lumber at moderate prices.

City of Douglas, the county seat, is located on the Platte River and Wyoming Central Railroad, and has about 800 inhabitants. The city is putting in a good system of water-works, has its streets well graded, good sidewalks, a handsome brick school-house, and numerous substantial business places and dwelling houses. A national bank is located here, and occupies a handsome brick and stone building. There are two weekly newspapers published at this point.

At Inez, 16 miles from Douglas, are the mines of the Fetterman Coal Company, which supply large quantities of coal to the Wyoming Central Railroad.

Glenrock and Lusk are towns in this county on the Wyoming Central Road. Each has a weekly newspaper, a bank, and good business houses and residences. At Glenrock are the mines of the Dale Creek Coal Company. Lusk is on the Niobrara or Running Water River, in the midst of a splendid grazing country, and where agriculture is carried on without irrigation. The soil is deep and rich, and good crops have been harvested.

CROOK COUNTY.

Crook County, organized in 1885, with a voting population of a little over 500, is one of the most promising counties in the Territory. Its area is 10,300 square miles. It is watered by the Powder River, Little Powder, Cheyenne, Belle Fourche, Little Missouri Rivers and their numerous tributaries. Along these streams are fine farming lands growing every variety of grain and vegetables usually produced in southern Dakota and northern Nebraska. Very little irrigating is done in this county, the most of the lands in the valleys being adapted to agriculture without the artificial application of water. Wild fruits of the smaller varieties, such as plums, gooseberries, currants, berries, etc., grow plentifully. There is good timber in the eastern part of the county and excellent grazing lands throughout. A branch of the Burlington and Missouri Railroad is being built into Crook County near the southeastern corner, and will probably traverse the entire county east to west, with a branch running to the northern line. The building of a railroad has been hastened by the discovery of large deposits of good coking coal, and the mines are expected to furnish a vast tonnage for the railroad and supply coal to portions of Dakota and the northwestern part of Nebraska. Large quantities of this coal will find a market in the adjoining States and Territories on account of its coking properties, even where coal for necessary fuel purposes is furnished from other points.

There are tin mines upon which development work is being pushed in the eastern portion of the county. The great number of men that will necessarily be employed in the mining of coal, tin, and other minerals in

Crook County will furnish a market for its agricultural products. Silver, lead, and copper are found in this county, and some work has been done towards their development, while the gold placer mines on Sand Creek have also been worked with profit. Gypsum is found in inexhaustible quantities, and superior building stone, including limestone, granite, porphyry, etc. Salt-producing springs have been discovered near Jenney's stockade, and an oil district in the same vicinity covers some 400 square miles. A more elaborate account of the minerals of this county will be found in the paper by L. D. Ricketts, Territorial geologist, which is made a part of this report.

City of Sundance.—Sundance, which is the county seat of Crook County, has two banks, two weekly newspapers, a substantial and imposing brick court-house; also a system of water works, a hose-house built of brick, and town hall. Sundance is reached by stage from White-wood, Dak., on the Rapid City branch of the Northwestern Railroad. Upon the completion of the Burlington Railroad to a point within 40 miles south of the city a stage route will probably be established.

FREMONT COUNTY.

Fremont County, with an area of over 20,000 square miles, is the largest in the Territory. It contains perhaps more undeveloped wealth than any other county. Gold, silver, and the base metals are found in nearly all sections of the county. There are rivers or small streams in all the valleys, and the altitude in some parts of the county is less than 5,000 feet. Agricultural products, in a few localities, can be grown without irrigation, but the yield is greatly increased by using water.

Stock raising is the principal industry. The county has no railroad within its borders, and its extensive basins of petroleum, immense beds of coal, and other products must await cheaper transportation than is now afforded.

The Shoshone Indian Reservation occupies a large portion of the central part of the county, and includes the fertile valleys of the Wind River. Some conception of the size and importance of this county can be had when it is stated that it is larger in area than Massachusetts, Rhode Island, and Delaware combined, and more than one-third to one-half of its area is suited to agricultural pursuits.

About 4,000 square miles of this county is underlaid with coal, besides vast deposits of soda and exhaustless fields of oil. Gold, silver, copper, iron, marble, granite, etc., are found in many localities, but aside from mining the precious metals these resources remain undeveloped. This county is estimated to have produced more than \$5,000,000 in precious metals; and quartz and placer mining is more active here than in any other part of Wyoming. A French syndicate, whose operations are managed by Mr. Emile Granier, has invested over \$250,000 in the development of rich placer grounds, and it is believed the project will yield remunerative returns.

Lander.—The county seat of Fremont County is quite a prosperous town. It has a bank, two weekly newspapers, good schools, and a commodious and well-built court-house of brick and stone. This town is reached by stage from the Union Pacific at Rawlins, 130 miles south, and a stage line is also operated between Lander and Billings, Mont., on the Northern Pacific Railroad. The principal business comes from the south on the line of the Union Pacific. Within the past year, however, considerable freight has been shipped from the East via the Wyoming Central and Casper, about 150 miles distant from Lander. The

Shoshone Indian Agency and the military post of Fort Washakie are located about 15 miles from the county seat. Lander has a flouring mill and is soon to have an electric-light plant. The town is well built and is provided with churches and good schools. The subject of incorporation as a city is under consideration.

JOHNSON COUNTY.

Johnson County has an area of nearly 10,500 square miles, comprising rolling plains, fertile valleys, and extensive forests. The range of mountains known as the Big Horn traverse almost its entire length, rising to an altitude of nearly 14,000 feet, while many of the valleys are less than 5,000 feet above the sea level. The county has no railroad and consequently no adjacent outlet for its surplus products. It is a good grazing country, and is not excelled by any other portion of the Territory as an agricultural region. Johnson County has vast oil and coal deposits and other minerals. It is one of the best watered divisions in the Territory; and, as the soil is good and much of its surface is favorable to cultivation, its agricultural possibilities can hardly be estimated. Timber in this country is very plentiful and furnishes the only supply of lumber that is used or needed by settlers. Johnson County has a prosperous fair association, organized in 1886. Meetings are held in June and September, and \$10,000 are distributed in premiums and prizes.

City of Buffalo.—Buffalo, the county seat, is located on Clear Creek, 225 miles north of the Union Pacific Railroad and about 140 miles from the Wyoming Central at Douglas, and is reached by stage from that point. The city has an electric-light plant, water works, a \$40,000 court-house, a \$15,000 three-story brick flouring mill, good school buildings, national bank, two newspapers, several churches, and numerous brick residences and business buildings. Fort McKinney, a regimental post, is situated 2 miles from the city. The scenery about the post and city is very fine. A stage line extends from Buffalo to Custer, Mont., on the Northern Pacific Railroad, also a stage line to Sundance. Telegraph and telephone lines connect the city with the fort and with railroad points. Buffalo has a good volunteer fire department, building association, and board of trade. Fraternal societies are well represented. A United States land office is situated here.

LARAMIE COUNTY.

This, the oldest county of Wyoming, covers over 7,000 square miles, and is located in the southeastern portion of the Territory. Being first in settlement, it is the most developed, and ranks first in wealth and population. The county slopes toward the eastward from the Black Hills of the Laramie range and varies in altitude from 4,000 to 8,000 feet. Probably one-fourth of this country can be successfully irrigated from the numerous streams in all parts of the county. There is another portion upon which agricultural crops are being raised without irrigation, and the remainder is superior grazing land. The county now supports an immense number of cattle and horses and some sheep. There is a great variety of undeveloped resources in iron, coal, copper, gold and silver, marble, sandstone, granite, mineral paint, mica, etc., all being found in great quantity.

The county generally comprises rolling plain and level land easily broken and cultivated, being free from stone and other obstructions.

In exceptionally wet seasons the natural rain-fall is sufficient to produce grain and vegetables, and as the soil is rich large crops are gathered. To insure a reliable crop, however, irrigating ditches and a supply of water are necessary. During a period of four months in 1886 there were recorded papers for over 500 canals and ditches, averaging some 1,200 miles in length, and covering more than 200,000 acres of land in the southern and central portion of the county. The works of one irrigating company include 2 canals, 37 and 29 miles long, respectively, and from 20 to 30 feet wide, and a tunnel through solid granite nearly three-fourths of a mile long, large enough to admit a flow of 1,500 cubic feet of water per second. This enterprise is intended to reclaim over 50,000 acres of desert land, and cost \$500,000. There are other companies that have expended from \$20,000 to \$75,000 each in irrigating ditches. The North Platte runs diagonally across this county, and the Laramie River, a large stream, empties into it from the south. Numerous large creeks, such as Horse Creek, Lodge Pole, Crow, and others rise in the Laramie range, skirting the western boundary of the county and flow eastward across the county into Nebraska.

The Union Pacific railway crosses near the southern line, the Cheyenne and Burlington enters at the southeast corner, and the Denver Pacific and Colorado Central run southward from Cheyenne. The Cheyenne and Northern runs northward across the country. The Wyoming Central, while not touching the county on the north, runs in Converse County almost parallel with and quite near to the northern line of Laramie County. Railroad lines are projected from Cheyenne northeastward to the Northwestern Railway, northward by the Burlington to connect its northern and southern Wyoming branches; also southward and west by the same company.

City of Cheyenne.—The county seat of Laramie County and capital of the Territory is on Crow Creek, in the southern part of the county. It is a well laid out, handsomely built city, and is noted for the enterprise of its citizens. It was designated as the capital of the Territory in 1869, and the proposed constitution for Wyoming makes it the State capital. Cheyenne is 516 miles from Omaha, on the Union Pacific, and is at the junction of the Cheyenne and Northern, Colorado Central, and Denver Pacific railways. It is the present terminus of the Cheyenne and Burlington, and will doubtless be the junction of the Burlington routes, extending north, west, and south. Extensive shops of the Union Pacific are located here, which will cost between \$2,000,000 and \$3,000,000 when completed, and will employ 2,000 or more men. The amount expended in shop buildings and machinery the present year will exceed \$500,000, and the force will be increased before the close of the year by about 500 men.

Cheyenne has an extensive system of water-works, good sewerage system, fire department and fire alarm system, telephone exchange, electric and gas light in streets and buildings, opera house, club houses, expensive business blocks and elegant residences, ten churches, four banks with an average capital of over a million dollars, and three daily and three weekly newspapers. The city has three large public school buildings and another authorized to be built; a convent building erected at a cost of nearly \$50,000; deaf, dumb, and blind asylum; county hospital; and also a capitol building, which is described in this report under the head of public buildings. The city has a very handsome public park, covering four blocks; has commodious hotels, street cars, substantial and fine society buildings, such as Masons, Odd Fellows, Knights of Pythias, etc.

Fort Russell, 3 miles northwest of Cheyenne, is a permanent military post, the largest and most important in the Department of the Platte. It has lately been supplied with modern water and sewerage system, and the buildings for officers and men are of brick, containing all the modern improvements.

Cheyenne enjoys a free mail-delivery system. It is the supply point for an extensive stock-raising country adjoining. The city is justly noted for its buildings, numerous shade trees, lawns, stone and cement sidewalks, and perfectly graded streets. The Territorial Fair Association grounds are a mile from the city. Cheyenne has a board of trade, a Young Men's Christian Association, with free reading-room and gymnasium, and fraternal societies are well represented. The Union Pacific has here a handsome station building of red and gray sandstone, 225 by 56 feet in size, two and three stories high and costing over \$100,000. The Burlington has a fine brick and stone station, which cost with ground under it about \$90,000. The towns of Pine Bluffs, Granite Cañon, Silver Crown, Chugwater, Bordeaux, Uva, Wendover, Fairbanks, and others are in Laramie County.

SHERIDAN COUNTY.

This county occupies a position in the north central part of the Territory, is 100 miles from east to west along the line of Montana, and 30 miles north and south, giving an area of 3,000 square miles, or about 2,000,000 acres of land, which competent authority has divided as follows:

	Acres.
Agricultural.....	640, 000
Grazing.....	900, 000
Mountains, timber, etc.....	500, 000

What this county needs more than anything else is railroads. It possesses many natural routes for railroads to approach from either north or south. Surveys have been made through this county by the Burlington, the Cheyenne and Northern, and the Northern Pacific. The building of a railroad through the county will greatly stimulate all branches of trade and add to the already increasing growth of the county, and it is hoped the next year or two will witness the advent of one or more roads. Sheridan is a new county, authorized by the legislature in 1888, when it was taken from the northern part of Johnson County.

The financial condition of the county is good, and it has excellent prospects. It is, perhaps, the most advanced county in the Territory as regards agriculture, and abundant crops of grains and vegetables of the best quality are annually grown. The soil is rich and fertile, and an abundance of water to irrigate is constantly furnished from the Big Horn Range, extending north and south across the county. When the rains are abundant irrigation is unnecessary for moisture, but is useful here, as elsewhere, in fertilizing the soil. In this county stock raising, combined with farming, is, perhaps, pursued to a greater extent than in any other. Nature has supplied this county with superior grasses in abundance, and the raising of live stock, either in small or large herds, is very successful. Good schools, averaging seven months per annum, are established throughout the county. The average monthly salary of teachers is over \$52. Church services, well attended, are held in nearly all parts of the county, and the organization of churches is advancing. The mineral resources are, to a great extent, undeveloped. Some gold and silver

mining is done in the Big Horn Mountains, and copper is found in proximity. The county is rich in coal of fair quality, which is very accessible, being found in the hills adjoining farming lands. The quantity is inexhaustible, but is at present used only to supply the farmers and settlers. A large supply of timber is found in the mountains, and the lumber manufactured of it is of good quality and suitable for building purposes. There are eight saw-mills reported at work in the county. Timber is also found along the streams. This county has the distinction of having the first agricultural fair held in Wyoming.

City of Sheridan, the seat of government of this county, is beautifully situated near the junction of Big and Little Goose Creeks. The town is surrounded on all sides by broad and fertile valleys, well watered, and producing in abundance a large variety of agricultural products. No town in the Territory is situated in the midst of so extensive a farming region—good roads, well graded and bridged, laid out in all directions. It partakes largely of the nature of the growing towns and cities of the grain-growing Western States. There are a dozen or more mercantile establishments, representing the different lines, and residences and general buildings in proportion. It has an artesian well, supplying pure soft water.

Sheridan County has other thriving towns.

SWEETWATER COUNTY.

This county contains nearly 10,000 square miles and enjoys the distinction of being the principal coal-producing county in Wyoming. It is also adapted to stock raising and agriculture. Green River flows through this county and has many large tributaries, and the streams, as a whole, offer an almost inexhaustible supply of water with which to reclaim the dry but fertile lands. The Union Pacific Railroad extends through this county from east to west, and the Wyoming Eastern, or Pacific Short Line, will pass through the northern portion. Capital is needed for extensive irrigation works. An eastern company are already at work on the Big Sandy, and their operations embrace the taking out of a large canal, the irrigation of an immense area, and the founding of a town and agricultural district.

The town of Green River, the county seat of Sweetwater County, has not adopted a municipal government. The town is on the Union Pacific Railway where it crosses the Green River. It is the junction of two divisions on the main line of the Union Pacific and the Oregon Short Line division, and extensive repair shops are located here. The surrounding country is devoted to stock raising, and coal mining is extensively carried on within 15 miles. At this point water is taken from the Green River through a large system of water-works to supply the city of Rock Springs.

Rock Springs, in Sweetwater County, is a mining city of some 3,000 inhabitants and is in the best coal-producing country in the Rocky Mountains. The Rock Springs coal is justly celebrated from the Pacific Ocean to the Missouri River. The city has a water-works system which cost exceeding \$200,000. Its streets and buildings are lighted with arc and incandescent electric lights. It has a bank, two newspapers, two schools, four churches, volunteer fire department, excellent commercial houses, suitable hotels, and numerous residences. Perhaps no city or town in Wyoming is increasing in population, wealth, and general importance as rapidly as Rock Springs. Though situated in the much-abused Bitter Creek region, it is destined to become one of

the large centers of population. The coal mines here furnish employment for over 1,500 men, and this number will be more than doubled in the not distant future. The city formerly contained some 800 Chinamen, but the number has been reduced about one-half, and these are gradually giving way to other classes of laborers.

UINTA COUNTY.

Uinta County covers over 15,000 square miles, equaling in area the old States of Massachusetts, Connecticut, and Delaware combined. In this county is the Yellowstone National Park, described elsewhere in this report. Stock raising, coal mining, agriculture, and the manufacture of lumber are the principal industries. The altitude ranges from 5,000 to 8,000 feet and the climate is good. The soil is rich and very productive. This county is well watered by the Bear, Green, Salt, and Snake Rivers and their numerous forks and tributaries. The flow is rapid, furnishing good water-power for mills and factories and water for irrigation. Timber is abundant on all the mountains for lumber, fuel, and mining purposes. Perhaps more lumber is manufactured in this county than in any other in the Territory. The supply of coal in Uinta is practically inexhaustible. It exists in veins of from 4 to 40 feet thick. Oil springs have been discovered here, from which are constant though small flows of oil. The Union Pacific crosses the county in its southern portion and the Oregon Short Line in the south central portion. The Pacific Short Line has also a survey through the county. In addition to coal and oil, gold, silver, lead, asphaltum, asbestos, gypsum, kaolin, iron, etc., are found, but are undeveloped. Cattle, sheep, and horses do remarkably in this county, and trotting horses are produced equal to the famous stock of Kentucky. Many first premiums for racing in adjoining States and Territories have been taken by Uinta horses the present season.

The City of Evanston.—This city is the county seat, has a population of over 2,000, and is one of the most prosperous and promising towns in the Territory. It is pleasantly situated in the Bear River Valley, with many natural advantages. It is the home of wealthy cattlemen, mine owners, and bankers, and is improving very rapidly. The Union Pacific shops, located here, employ a number of skilled mechanics. The city has two banks, two newspapers, five churches, good school-houses, electric-light plant, water-works, and other improvements. The Territorial insane asylum is situated here, and also the United States land office for the Evanston district.

Almy, 3 miles west, has nearly as many inhabitants as Evanston. About 1,000 men are employed there in coal mining.

YELLOWSTONE NATIONAL PARK.

During the month of August last I visited the Yellowstone Park, spending a week in that wonderful region. While the Park is a reservation directly under the control of the General Government, yet it lies almost wholly within the boundary of Wyoming and is justly regarded with pride by all its citizens. I trust that some suggestions which have occurred to me in relation to the enlargement and preservation of the Park will not be unacceptable.

The Yellowstone National Park occupies an area reported as 61.8 miles long by 56.6 miles wide, in the northwestern corner of Wyoming, with the exception of about 2 miles which projects on the northern

border into Montana, and a strip of about the same width extending over into Montana and Idaho on the west. It can be described as a region of hot springs and geysers, mountains and cañons, lakes and waterfalls. The beauty and grandeur of its scenery are not excelled by any locality. Here are found the largest and most numerous geysers in the world. No less than seventy of these are active geysers, some of which throw up columns of boiling water and steam over 250 feet in height, while there are thousands of boiling hot springs in whose depths are reflected all the primastic colors of the rainbow. Besides the geysers are majestic mountains, beautiful lakes and rivers, with numerous cascades, rapids, and waterfalls. The Lower Falls of the Yellowstone are over 350 feet in height, and with its Grand Cañon are not surpassed by any scenery in the world. Differing from the splendors of Niagara or the Yosemite it is no less impressive.

Although exploring parties have at various times passed on all sides of this most curious region, its wonders remained undiscovered until 1870, and it was not until 1872, after the explorations of Dr. F. V. Hayden, that it was withdrawn from settlement and set apart for all time as a pleasure ground for the people. It is not strange that the Park remained thus unexplored, situated as it was on a plateau 8,000 feet above the sea-level, and surrounded on all sides by lofty mountains, the sides of which were covered with a dense growth of pine forests, and snow-capped summits 10,000 to 13,000 feet high. The only approaches to the Park were over these mountains, filled with fallen timber, or through deep cañons, whose precipitous heights and rushing rivers made them dangerous and well-nigh impassable. Having crossed the mountains or passed through one of the deep gorges, the surface of the Park is found to be undulating, and since roads have been cut through the timber the various points of interest are easily made accessible. The Mammoth Hot Springs, Norris Basin, Lower and Upper Geyser Basin, Yellowstone Lake, and the Grand Cañon and Falls of the Yellowstone are the principal points visited by tourists, and embrace a circuit of about 150 miles by stage or private conveyance.

Railroads, stages, and hotels.—The hotels in the Park are managed by the Yellowstone Park Association under certain restrictions of the Government. They afford comfortable accommodations at \$4 per day. Wagons, saddle horses, and guides can be obtained during the season at reasonable rates. The Northern Pacific Railroad sell excursion tickets from their main line at Livingston, Mont., into the Park and return, including hotel accommodations. The Union Pacific Railway also sell round-trip tickets to the Park via Beaver Cañon, on the Utah Northern Railway, from the west. The season in the Park is limited to between the 15th of June and the 30th of September. When parties desire to remain in the Park more than the limited times specified in their tickets, they should be allowed to do so. The present system of hastening people through is frequently very inconvenient, and could be better regulated. It is true, stop-over tickets or checks are provided for in the regulations of the Interior Department, but practically it is a dead letter, as no extra transportation is kept at intermediate points. The tourists are required to take the chances of securing room in following stages where a place is surrendered in the stage or wagon started with. As every vehicle is supposed to start out from the initial point with a full load of passengers, it can be readily seen that until a full load desire to stop over together, passengers can not take advantage of the stop-over privileges accorded by the Department regulations. If enough transportation service were provided by the Yellowstone Park Trans-

portation Company at all hotel points, it would accommodate reasonably well all tourists desiring to stop over.

There is also need, on the part of people of modest means, of cheaper hotel accommodations, but this I understand is to be provided for next season by the hotel company. It would also be a great convenience if there were places where supplies could be bought at reasonable prices by campers or persons visiting the Park. The hotels as now conducted in the Park are in the main very satisfactory, and if the transportation company showed less disposition to crowd and rush tourists through the Park there would be less cause for complaint. The company furnishes a good class of animals and vehicles.

The usual time spent by tourists in the Park is from three to seven days, but more than twice that time could be taken up in visiting the many places of interest. New objects are constantly being discovered that add to its almost endless attractions. A steam-boat to be launched next season in Yellowstone Lake will open up a score of places along a shore line 112 miles in length. This beautiful sheet of water of irregular shape is about 30 miles long, with an average width of from 12 to 15 miles. There are besides in this vicinity the beautiful Shoshone Lake and Heart Lake under the shadow of Mount Sheridan. It is in this vicinity that the Utah Northern (Union Pacific) has projected a road to be built in the near future, enabling tourists to reach the Park at its southern extremity. The National Park branch of the Northern Pacific is only 6 miles from the Mammoth Hot Springs, and the majority of visitors enter the Park at this point. From Beaver Cañon the distance is nearly 100 miles to the Lower Geyser basin through a beautiful mountain region that affords fine hunting and fishing just outside the Park. A stop may be made midway, at Henry Fork, a tributary of Snake River, a place that has the reputation of being a paradise for the huntsman.

Military protection.—Capt. F. A. Boutelle of the First U. S. Cavalry, now superintendent of the Park, has in his service two companies of cavalry, comprising 160 soldiers, one company being in command of Capt. P. S. Bomus. Through the courtesy of Captain Boutelle I have been permitted to examine his report for the fiscal year ending June 30, 1889, and I most heartily concur in the recommendations therein contained, especially his request for an appropriation of \$100,000 to clear up the fallen timber and prevent the destruction of growing timber.

The paramount need of the Park is more adequate protection against the spread of forest fires. Without it the vast timber area in and around the Park is in danger of being destroyed. Such a calamity would not only greatly detract from the beauty of the Park, but work incalculable damage to the streams that have their headwaters in this region. Everything has been done to prevent fires that the limited means at the disposal of the superintendent would admit of, but his efforts are likely to be fruitless unless the Government comes to his aid by liberal appropriations. The forests are full of fallen timber, and the recommendation that it be cleared away at least 100 yards on each side of the traveled roads is important. It is usual for campers to build fires on the roadside, and the taking away of this timber would remove one of the most frequent causes of forest fires. There should be provided rubber buckets for the Park guards that could be filled at the nearest streams or tanks conveniently located to extinguish fires. Another precaution would be to give the superintendent power to designate certain points for camping purposes.

Under the present circumstances the establishment of a military

headquarters for the purpose of protecting the Park is the best arrangement that can be made. The cavalry make excellent police for a domain covering over 3,500 square miles.

There should, however, be a larger force than at present quartered there, and I suggest that five companies instead of two could do better service in enforcing the regulations of the Park. It is my opinion, from information gained from tourists and also from personal observation, that the soldiers are disposed to be obliging and courteous towards all classes of persons visiting there. They appear to be interested in their work, and show commendable industry in protecting the formations, and, whenever necessary, extinguishing fires. With the small force on duty there at the present it frequently happens one soldier, in a single day, is obliged to be guide and escort to tourists, to act as police in preventing spoliation, and then at night to ride perhaps 20 or 30 miles, with shovel and ax, to prevent the spread of forest fires. No place in the Rocky Mountains affords a better location for a military station, and where, in times of peace, they could be more useful.

Civil authority and law.—The necessity of providing some means for punishing violations of law in the Park are very urgent, and the absence of such provision may be justly regarded as a reproach to the legislative branch of our Government. The violation of certain rules and regulations permit the expulsion of persons from the Park, but in some instances crimes of the most serious nature go unpunished for the want of any tribunal to take jurisdiction.

The report of the House committee on Senate bill No. 283, pending in the last Congress, but not passed, states:

The machinery provided by the act for the administration of justice within the Park is simple and inexpensive, being substantially the same as that contained in the act which passed the Senate at the last Congress, but involving much less expense. It involves only the appointment of a local magistrate, who shall reside in the Park, and who shall try all violations of the rules made for its preservation. Indictable crimes may be tried in the district court of Wyoming, and the Park magistrate is invested with the power of arresting persons committing such crimes and have them conveyed within the jurisdiction of the Wyoming court.

An offender can be escorted by the military force out of the Park for defacing the formation or any spoliation of the natural curiosities, but for murder, or theft of private property, there is no civil magistrate to act, and a perplexing problem is met.

Enlargement.—I most fully agree with the same report (House report No. 3071, to accompany Senate bill No. 283), recommending the extension of the Park $9\frac{1}{2}$ miles southward and some 15 or more miles eastward. The reasons given in the report of the House committee from which the following quotation is made, are worthy of consideration:

The enlargement of the Park by this bill is about 1,600 square miles. The entire country is absolutely useless for agricultural purposes and is barren of mining resources, while the geological structure of the region renders it almost certain that no mineral of any value will be found within the proposed additional area.

The object of first importance in maintaining the Yellowstone Park, from an economic point of view, is the preservation of the forests which now cover the Park plateau and the adjacent mountains. The maintenance of timber near the headwaters of the large streams of the country is everywhere attracting attention, and it is now very generally admitted that certain restrictions in the removal of forests is demanded by the public welfare, and deserving the consideration of Congress.

The area of country which it is proposed to add to the Park is singularly well adapted for the storage of water. No region in the northern Rocky Mountains possesses the same favorable conditions for receiving and distributing a magnificent water supply. For the preservation of this water in this natural reservoir the dense timber which covers the region is of immense value.

The country on the east side of the Park is a high mountain range, with an average

elevation of over 9,000 feet, from which rises numerous peaks, from 10,000 to 11,000 feet above sea level. It is an exceptionally rough and rugged country, and one of the most inaccessible regions in the northern Rocky Mountains. It has always been an effectual barrier to the progress of immigration westward, all travel passing to the north or south of this range. Notwithstanding its uselessness for settlement, it is, owing to the timber and abundant water supply, a most valuable inheritance of the nation. The belt of country lying to the southward of the present Park boundary is for the most part volcanic in its origin, and, while less rugged than the mountains to the eastward, is a wild, broken country, equally unfavorable for agricultural or grazing purposes. This proposed addition to the Park abounds in numerous large streams and lakes, the sources of the Columbia and Yellowstone, the waters running to both oceans. Unless protected by national legislation it will soon be despoiled of its timber.

The following extract from an article recently published by Mr. Arnold Hague, of the U. S. Geological Survey, points out clearly the value to the nation as a game preserve:

The present limits of the Park are far too small for a satisfactory game preserve, if it is intended to make the place one where large game will naturally roam, particularly when driven from outside for protection. The proposed extension of the Park will take in an area of country abounding in wild game of all kinds. It is a favorite resort of deer, elk, bear, and mountain sheep. The country immediately south of the present southern boundary abounds in sheep and elk. It is a favorite breeding place of the latter, thousands of cows and calves being found here throughout the summer. By adding this area to the Park and rigidly enforcing the game laws the whole country will soon abound in nearly all species of game found in the Rocky Mountains, and will soon become so densely stocked that the surplus, seeking new haunts, will run outside the Park limits, affording abundant sport for the true hunter.

Location of hotels.—The large hotel at Upper Geyser Basin is quite near the Old Faithful Geyser, probably about half the distance required by law or regulation. There is no visible reason why an exception should not be made and this hotel allowed to remain. It is not upon or near the formation so that there can be no possible danger. The hotel is located on a high level that forms a natural terrace to the country below. It is a perfect location, and the only one available in that vicinity. To be compelled to remove it to the requisite distance, would not only be a great inconvenience but a misfortune.

Fish.—Many of the lakes and rivers of the Park are peculiarly adapted to fish culture. Col. Marshall McDonald, United States Fish Commissioner, who visited the Park this season, appreciates the great advantages which it possesses as breeding grounds for stocking the headwaters of the Missouri and Snake Rivers; and I am informed will recommend the location of a fish hatchery in the Park. There are but a limited number of native trout and salmon now in the Park, and such an establishment would be the means of adding to the varieties of fish, besides stocking streams that are barren. The operations of the hatchery would also be of interest to a large class of visitors.

Boundary marks.—The boundaries of the National Park should be not only established but plainly marked, so plainly that every one in crossing the line from any direction might know when they were within the legal boundaries. This information is necessary to enable people to observe the law about killing the game and also to those who guard the Park from within. If an opening through the timber along the entire line could be made, it would plainly mark the boundary and act as a safeguard against the spread of fire. While many open places occur, the openings made in the timber adjoining would be sufficient to indicate the line, or if stone monuments could be erected in the open fields. If this system can not be adopted, a wire stretched on poles would make a plain boundary and at the same time serve as a line for telegraph or telephone messages.

Reimburse Wyoming.—The Territory of Wyoming, realizing the importance of exercising a protecting care in the Park and owing to the lack at that time of proper laws and regulations on the part of the National Government, passed laws in 1884 providing for the selection of special officers, the building of a jail, etc., to protect the Park and punish offenders. A sum aggregating over \$8,000 was appropriated and expended to carry the law into effect and assist the Government in maintaining law and the Park from spoliation. The Territory's efforts in this direction were valuable at the time, and I recommend that Wyoming be reimbursed for the amount expended.

Value of the Park.—From personal observation and assurances received from a large number of those who have visited the great scenic resorts of the world I am convinced the Yellowstone National Park is unrivaled in this country or abroad. No language can give an adequate description of this most remarkable region; it must be seen to be appreciated. As the fame of the Park is destined to spread, the number of visitors from all parts of the world will increase from year to year. The Park is surrounded by a country that is thinly populated, but that country is rich in undeveloped resources, and only needs the acquisition of additional brains and capital to make it wealthy and prosperous. Travelers who visit the Park come from all lands, and are among the most intelligent and wealthy people of the age, and the benefits which this class of people, possessing capital and intelligence, can confer upon this undeveloped surrounding country that they must become acquainted with in passing through are incalculable.

Thus the Park becomes of pecuniary value to the nation, and especially to the great undeveloped West.

Conclusion.—I can not dismiss this subject without urging in the most earnest way immediate action on the part of the Government to protect and preserve this most wonderful resort. The exigencies of the case require action and the expenditure of considerable money now without delay. Extensive forest fires would endanger the locality beyond reparation for years to come.

RECOMMENDATIONS.

In concluding this report permit me to again refer to the subjects hereinbefore discussed, and in that connection to respectfully and earnestly submit the following suggestions:

Statehood.—That Congress at its coming session pass an act providing for the admission of Wyoming as a State.

Surveys and public lands.—That largely increased appropriations be authorized for surveys in Wyoming, and that provision be made for resurveying erroneous and imperfect surveys.

That authority be given for surveying agricultural, grazing, mineral, and timber lands together rather than limit the survey to actual agricultural lands. The last often being in small bodies, contracts for their survey can not be let under the terms of late appropriation acts, and actual settlers suffer in consequence.

That the abandoned military reservations of Forts Sanders and Fetterman be opened for settlement or sale, preferably the former.

That the United States donate to Wyoming arid lands to enable her to secure their reclamation—this to be done in lieu of the swamp lands granted to other States.

That Congress appropriate money sufficient to cover the expense of

selecting lieu lands in place of those heretofore appropriated for other purposes.

That the Land Department without delay approve of the selection made by Wyoming of 72 sections of university lands, so that the University may lease them under existing laws.

That more liberal provisions be made for mill men desiring to manufacture lumber from timber on public lands.

That some plan be adopted for the control and prevention of forest fires on the public domain.

That more public land offices be established and maintained in Wyoming.

Storage reservoirs.—That Congress take early action to secure the full utilization of the waters of our mountain streams and the retention in storage basins of the water now running to waste.

Pacific railroads.—That some arrangement be made with the Pacific railroads to secure the Government and at same time enable the railroads to proceed with the construction of branch lines.

Indians and Indian reservations.—That authority be expressly given for the taxing of the property of white men when located on Indian reservations; that the Territorial courts be authorized to try and punish white men for offenses against Territorial laws when committed on an Indian reservation; and that the Indians be required to remain within their reservations.

Mail facilities.—That the mail facilities in Wyoming be greatly extended and expedited.

Judges of the supreme court.—That four justices of the supreme court should be provided for Wyoming, instead of three, as at present; first, because the field is a large one, litigation is growing with the increase of population, and the labor of the judges is steadily increasing; second, because, in case of appeal to the supreme court of the Territory, the judge sitting on the case below must now again sit in judgment upon his first decision, while, were there four judges, three of them could sit in the supreme court, none of whom had before considered the same case.

Deep harbor.—That Congress provide for a deep harbor on the Gulf of Mexico.

Yellowstone National Park.—That a regular military post be established and better quarters be provided for officers and men.

That the military force in the Park be increased so as to afford greater protection, especially against forest fires.

That \$100,000 be appropriated to clear away the fallen timber in the Park, since the forest fires originating in the same do great damage and disfigure the natural curiosities.

That the Park be enlarged on the west and south, since this will tend to preserve the forests and thereby increase the summer supply of water for the headwaters of the great American rivers, and will also insure a better game preserve.

That the boundaries of the Park be clearly marked and defined, so that the place of the commission of crime may be more readily ascertained.

That adequate provisions be made for the punishment by civil authority of violations of law in the Park.

That a Government fish hatchery be established in the Park for the stocking of barren streams.

That appropriations of money and the expenditure of the same for the preservation of the Park be arranged for without delay.

That the Territory of Wyoming be re-imbursed in the sum of over

\$8,000 expended by that Territory in protecting the Park prior to March, 1886.

That the distance allowed between geyser formations and the location of hotels be lessened, especially with reference to the hotel at Upper Geyser Basin.

That the transportation company in the National Park be required to provide transportation service at all hotels to enable tourists to avail themselves of stop-over privileges.

That places be established in the Park where supplies can be bought by campers and others.

I am, sir, very respectfully, your obedient servant,

FRANCIS E. WARREN,

Governor of Wyoming.

Hon. JOHN W. NOBLE,

Secretary of the Interior.

PART II.

WYOMING EPITOMIZED.

Wyoming will be in size the eighth State in the Union. It is more than ninety-seven times the size of Rhode Island.

Statehood.—The Territory desires statehood, and having nearly 100,000 square miles of area, 100,000 population, \$100,000,000 of wealth, and extensive undeveloped resources, the people are entitled to the full benefits of State government.

Excepting coal, the mineral wealth of Wyoming has been but slightly developed. The extension of railroads now being built and projected will early bring about great changes and rapid development.

About 30,000 square miles of the Territory is underlaid with coal.

Wyoming will perhaps become more noted for her oils than any other product. Oil is found in large areas, some of the basins reaching 30 by 60 miles.

Mountains of iron and generous deposits of gold, silver, copper, lead, cinnabar, tin, sulphur, soda, salt, borax, asphaltum, gypsum, graphite, magnesium, asbestos, kaolin, and mineral paint are found; also marble, sandstone, limestone, granite, slate, and other decorating building stones.

The mineral wealth of Wyoming is more than sufficient to pay the national debt, as will be demonstrated by future development.

Natural gas is believed to exist, but no considerable discovery has yet been made.

Brick clay exists in all parts of the Territory.

One hundred and fifty thousand horses and mules, 1,500,000 cattle, and 1,250,000 sheep graze on the ranges of Wyoming.

Nutritious grasses, where they grow, furnish abundant food for the domestic animals and wild game.

Irrigation is largely depended upon to raise farm products, yet small grains, grasses, and vegetables are raised without irrigation over a very considerable area. With irrigation alfalfa makes from two to four crops a year, and grains and vegetables make a phenomenal yield.

The Union Pacific Railway runs nearly 500 miles through southern Wyoming. The Denver Pacific branch runs south from Cheyenne; also the Colorado Central. The Cheyenne and Northern runs north from Cheyenne. The Oregon Short Line runs northwest from Granger, in the eastern portion of the Territory. The Fremont, Elkhorn and Missouri Valley Railway extends nearly 200 miles from the eastern border to the center of the Territory. The Burlington has a complete line to Cheyenne, and has a line graded, about receiving iron, in the northeast portion of Wyoming. The Wyoming Eastern will traverse the entire Territory from east to west, and many other projected lines and branches are reported in progress.

The climate of Wyoming is cool in summer and mild in winter, with

but few snow-storms, which are usually accompanied by wind, preventing a complete covering of the ground. While subjected to occasional heavy snow-falls, the average winters are neither severe nor long. We have few cloudy and many sunny days, and it is healthful in the highest degree.

The many rivers of Wyoming, with their numerous branches, water very large tracts of land, and also furnish food fishes.

Wild game abounds in nearly every portion of the Territory, and its wanton slaughter is prohibited by law.

A very large portion of the public lands are yet unsurveyed, and much of that surveyed is still unoccupied.

There is room for all, either in agricultural pursuits, mining, stock raising or other business.

The birds of Wyoming include over one hundred and twenty-five species.

Yellowstone National Park is nearly all within the borders of Wyoming. Its scenery and its wonderful freaks of nature are unequalled in the world.

Business in Wyoming is generally prosperous notwithstanding the present low price of the cattle product.

There are thirty-one newspapers printed in the Territory, four of them dailies.

The people of Wyoming are of high average in education and general habits. The early settlers came from nearly every part of the world, but later they came chiefly from the Eastern and Southern States.

Public schools are maintained throughout the Territory, and teachers are carefully selected.

The church edifices are very numerous, and many of them are costly and of high order of architecture. They are very generally attended.

The laws of Wyoming are good, and generally applicable to the country, and the people are law abiding.

No fatal contagious diseases exist among live stock, and the Territory constantly employs an efficient veterinary surgeon to prevent the dissemination of disease, and quarantine laws and sanitary regulations are maintained.

The Territory created the office of mining inspector to secure the safety of men employed in coal and other mines.

The office of Territorial geologist is maintained to encourage the development of mining.

The office of Territorial engineer provides a skillful official, whose duties are to encourage, superintend, and control irrigation.

The Territory has a fish hatchery for the purpose of stocking streams not already provided, and a competent fish commissioner is in charge.

The social status of Wyoming is excellent. Societies, literary, social, secret, and others, are well represented and satisfactorily supported.

Wyoming has a law library of 15,000 volumes, and other public libraries are found in the larger towns.

The flora of the Territory comprehends, in addition to flowering plants, large varieties of grasses, and some sixty species of mosses, lichens, and various species of tree flora, the latter more fully described under the heading of timber and lumber supply.

The fauna of Wyoming is extensive in its genera and species. Perhaps no State or Territory excels in this. Some fifty species of food-fishes abound in our water-courses and lakes.

Some thirty species of mammals abound, including game animals.

Wyoming now has a population more than double that of either

Alabama, Missouri, Ohio, Oregon, Illinois, and some other States, when admitted.

Women's suffrage, first adopted in 1869, is favored by both political parties.

Wyoming is becoming noted as a resort for those in search of health and strength and the highest physical development.

The Indians of Wyoming are not warlike, and efforts are being made to educate them in farming and other industrial pursuits.

The mail service is fair, but in many localities more mail routes and better facilities are needed to accommodate the inhabitants and to assist in developing the Territory.

Financial standing in the Territory—public, private, and corporate—is high.

There are two companies of Wyoming National Guards, already organized and equipped.

Wyoming has one county, Fremont, with an area equal to that of Massachusetts, New Jersey, Delaware, and Rhode Island combined.

The coal area of Wyoming is twice as large as that of Pennsylvania.

The mineral paint of Wyoming is the best ever used on bridges, roofs, and other structures exposed to the elements.

The people of Wyoming have \$10,000,000 invested in irrigating canals, ditches, and reservoirs, which is not included in the assessed valuation of the land on which the same are located.

The high mountain ranges of the Territory shield its valleys from the severe blizzards so common in some of the Western States and Territories.

The scenic features in Wyoming are remarkable. Meadows and great natural parks are encircled by lofty and majestic snow-capped mountains, their sides covered with forests, innumerable streams, great water-falls, and extraordinary and fantastic rock formations, and other grand and beautiful scenery.

The census of 1880 shows that Wyoming has the smallest percentage of illiteracy of any political division of the United States. The people are generally young, vigorous, industrious, and of high character.

Wyoming has provided laws for free county libraries and a small tax is levied for their support.

The secretary of the Territory will forward information in printed form to those seeking new homes in the West.

Wyoming has a Territorial agricultural fair and a number of county fairs.

Rain-fall in Wyoming averages on the plains about 14 inches; on the mountains perhaps three times as much.

There are twenty banks in Wyoming.

Interest rates are from 6 per cent. to 12 per cent.

Live stock and mining industries furnish an excellent market for all kinds of produce.

Wyoming public buildings comprise the capitol, university, fish hatchery, penitentiary, poor farm, asylum for deaf, dumb, and blind, and asylum for insane.

The cities and towns of Wyoming have a high class of municipal buildings.

Our undeveloped resources are abundant and very promising, simply needing brains, money, and muscle.

Wyoming has several telephone exchanges and fair telegraphic advantages.

Women's suffrage, conferred in 1869, is recognized and established in the proposed constitution.

Under the present administration all appointees of the Territory have been bona fide residents.

Representatives met in convention and adopted a constitution for the proposed State of Wyoming.

In 1886 the total acres of land assessed was 394,789, in 1889 it is 5,868,370.

Wyoming has already 1,000 miles of main trunk line of Union Pacific Railway, Chicago and Northwestern, and Chicago, Burlington and Quincy, but needs more.

The mean altitude is about 6,000 feet, ranging from 3,000 to 14,000.

Wyoming has numerous advantageous sites for the easy construction of large storage reservoirs.

The Territory produces annually a large amount of hay. Small grains do remarkably well.

The soils of Wyoming are generally rich, the only fertilizer needed being water. The sage-brush districts raise good crops when subjected to irrigation.

Four-fifths of the counties in Wyoming have substantial and commodious brick or stone court-houses.

Wyoming is the youngest of the Territories. It is 275 miles north to south and 369 east to west, forming a parallelogram.

School-houses and school property in the Territory are worth \$1,000,000. The Territorial public buildings have a value of \$500,000.

Wyoming has a compulsory school law, and the teachers are carefully selected.

Heavy forests cover over 7,000,000 acres of Wyoming, and there are about 15,000,000 acres having more or less timber.

School and university lands are rented in Wyoming and rental applied to support of public schools.

A valuable paper prepared by Dr. L. D. Ricketts, Territorial geologist, is in this report.

Wyoming cast a vote of 18,010 in 1888. The next vote will be much larger.

The streams of Wyoming furnish water enough to irrigate 18 to 20 per cent. of its area.

Wyoming has 600 streams already used to some extent for irrigation, and a great many more from which no ditches have been taken.

The number of recorded ditches is over 2,600, and there are more than 5,000 unrecorded.

The total length of irrigating ditches is over 5,000 miles.

Wyoming votes in favor of the Government assisting in establishing a deep-water harbor in Texas, on the Gulf of Mexico.

IRRIGATION A NATIONAL MATTER.

In September of this year the United States Senate Committee on Irrigation were at Cheyenne, the capital of the Territory, and the Constitutional Convention being in session, the committee were able to meet representative men from all sections of Wyoming. An adjournment of the convention was had in order to facilitate the taking of testimony regarding irrigation by the Senate committee, and it is believed much valuable data was collected.

Wyoming's competent and experienced Territorial engineer, Mr. El-

wood Mead, was in attendance, and among other documents submitted the following paper :

REPORT ON THE IRRIGATION OF THE ARID LANDS.

ENGINEER'S OFFICE,
Cheyenne, Wyo., September, 1889.

GENTLEMEN: As the official head of the irrigation systems of this Territory, I have the honor to present to you this statement describing its agricultural resources and possibilities by the aid of irrigation, the character and extent of the work already performed, and of explaining the views of our people as to the measures necessary to secure the full utilization of our water supply in reclaiming the unoccupied arid lands.

Among the arid commonwealths Wyoming stands the third in the extent of her irrigated land, while in the excellence of her laws and the legislative measures for the promotion of this interest she deserves even a higher rank. Although the youngest of the Territories and suffering greatly from the lack of railroad facilities, particularly between the agricultural districts of the north and the mines of the south, only California and Colorado surpass her in the mileage of canals or the area of land watered therefrom. This rapid development has been due to two causes, the first being the exceptional natural advantages of the Territory as a grazing region, and which at an early date made the raising of cattle its most important industry. With the cattle-men to open the way and make settlement possible, the farmer soon followed. And as the necessity for winter feeding to weaker stock became apparent, the profits of the cattle business were invested in the construction of ditches to enable such food supplies to be grown.

The second reason is found in the abundance of the water supply and the ease and cheapness with which the waters of the streams can be diverted. The description of these streams and the nature of the works already built to divert their water is given in Appendix A attached to this report. It will be sufficient here to state that the principal streams have their sources in mountains of sufficient elevation and extent to make them abundant accumulators and conservators of the needed moisture, and that from these natural reservoirs these fruitful arteries of our agricultural life penetrate every section of our broad area. No other arid State or Territory equals this in the number of its streams whose waters can be diverted or in the uniformity of their distribution over its entire area. The location of the natural water-courses is such that if they carried sufficient volume of water all the lands could be easily and cheaply watered, while on the other hand there is but little land which would not be made productive if the water could be had. Hence it is that no subject has to this Commonwealth the same ultimate importance as the proper conservation and use of all water that falls on its surface.

The solution of the problem of how best to accomplish this involves an inquiry into two matters: First, the proper distribution of the water over the land, and, second, the conservation and storage of the flood water and the water running to waste in the non-irrigating season. In considering these questions regard must be had to the works already built and to the methods adopted and in practice among the farmers of the Territory, since no methods can be successfully carried out which do not accord in a measure with the views and interests of those already in the work. While the area irrigated is far less than that awaiting reclamation, it is too important to be lost sight of in any plans for future work. The ditches now in operation and the acres of land which they water have involved the outlay of many millions of dollars of the earnings of our citizens. When they began their work the success of agriculture by irrigation was problematic. It was through their confidence and energy that the country now understands and appreciates its value and importance, and it is their efforts which have given the arid region whatever value it has; hence no action should be sanctioned which does not promise to promote the financial success and prosperity of the works already constructed. While the northern part of the Territory has outstripped all other portions in the extent and value of its irrigated lands, in all sections the construction of ditches has reached a surprising degree of importance, and there is no portion in which the agricultural lands do not form an important part of the natural resources.

Much of the work done is faulty, resulting in heavy and unnecessary expenses for operation and maintenance and great loss of water in distribution. We have too many small canals watering the bottoms and not enough large canals watering the uplands. Our methods and systems need reforming to prevent this in the future work. It is the result in part of the lack of means and experience on the part of the pioneer ditch builder, but very largely of late years of the unfortunate circumstances of our land laws being wholly unsuited to the conditions of this region and of their administration being in the hands of men ignorant of these facts.

It is a well-settled principle that lessening the number of ditches by building large high-level canals results in both economy of water and saving in operating expense. It also, as a rule, secures the watering of more fertile and productive land. To build large ditches, however, requires either a community of efforts on the part of the farmers owning the land or the introduction of capital to build canals to rent water. The first plan has seldom been successfully pursued. The length of time required to prepare for and complete the construction of a large canal, and the fact that farmers can produce nothing to support themselves or their families until this is accomplished has prevented its successful adoption. Hence the majority of the large irrigation works have been built as common carriers of water, this plan seeming to best meet our conditions and needs. There is no objection, so far as I am aware, and many things in favor of this plan, provided the canals are properly built and furnish water at a reasonable rental. They are a necessary and valuable feature of our irrigation development, and we should have such laws as will make the investment a safe one and secure their construction under such conditions as will enable them to furnish water to farmers at a minimum cost.

Unfortunately, however, the building of large canals to furnish water to the settlers on the public lands gives rise to a condition of affairs which, while well understood here, is apparently not appreciated elsewhere. Before the canal is built these lands are valuable only for grazing purposes, which value in most cases does not exceed 50 cents per acre. The construction of the canal, however, carries with it the assurance of their reclamation, enhancing their value to that of farming lands; so that, without the purchase of a water right, or without the owner of these lands having in any way contributed to their improvement, their value is increased, at a low estimate, from \$5 to \$15 per acre. This unearned increment is due entirely to the expenditure and efforts of the ditch company, which expects its returns from the rentals of water to the settlers on the lands thus made susceptible of cultivation. If therefore all filings under the ditch were made by persons expecting to become cultivators of the soil, and who would at once become users of the water, no harm would ensue.

Unfortunately, however, our land laws make possible an entirely different result. The increase in value resulting from the construction of the ditch is a rich field for the speculator. Parties having no desire or intention of becoming farmers can through the pre-emption law, the homestead law, and the timber-culture law, obtain possession of 480 acres of this land without having to rent a gallon of water from the ditch company, or in any way contribute to its maintenance or advantage. By the expenditure of 25 cents per acre they can in the same way obtain a three-year option on 640 acres additional by desert entry. Thus it is that over a thousand acres of land are withdrawn from honest settlement, and the speculator or entryman is in a position to blackmail the ditch company, as it is only by its buying him out and disposing of these lands to bona fide farmers that it can derive any income from the water supply. This situation of affairs has made it impossible in this Territory to construct large ditches simply as common carriers of water. The success of the enterprise makes it necessary that the lands should at once be brought under cultivation, and to accomplish this there must be some control over their settlement. This neither the ditch company nor the Territorial authorities can attempt at present.

There are in the Territory a number of important canals built to rent water, and all have suffered from the difficulty of securing a prompt settlement of the land reclaimed. Some of these have endeavored to protect their investment by securing this control of the lands, the most important instance of this being the Wyoming Development Company, its field of operation lying about 90 miles north of this city. It began originally with the intention of furnishing water to the farmers, but it soon became manifest that unless they could control the settlement of the lands the only parties to derive any benefit from their efforts would be the parties filing on the land, and that if the lands were to be actually made productive they must take steps to control their settlement. This was done, and in this work and in the construction of their canal about half a million dollars was expended. The enterprise has been in every respect a most praiseworthy one. Over 50,000 acres of land have been watered by one of the best systems of canals to be found anywhere in the arid regions, yet owing to the lack of appreciation of the real situation of affairs, and of the necessities of this region, these lands lie idle and unproductive in the hands of the Government, and the projectors of one of the best enterprises yet inaugurated in this Territory have been put to the expense and annoyance of maintaining for five years a system of costly and unproductive irrigation works.

The unfortunate outcome of this company's operations has been in the widest sense a disaster to the Territory. Its example is a menace and a virtual barrier to the inauguration of other enterprises of special magnitude, and has resulted in a return to the original practice of building small ditches where each individual could manage and control his own claim, the opportunities presented for the diverting of water making possible an extraordinary development of this nature. The evil consequences of this state of affairs are many. It creates a system difficult to control,

expensive to operate, and wasteful of water. Not only that, but many of our best lands can only be reclaimed through the medium of extensive and costly works. If during the past five years we could have had a system of land laws that would have enabled ditch companies to have secured actual settlers on the lands reclaimed, the number of important irrigation works and the extent and wealth of the irrigated territory would be fourfold that which exists.

A proper utilization, however, makes it desirable that additional changes, besides reforming our land laws, should at once be made. Since the area of land which can be irrigated is greater than the available volume of water, it is desirable that our irrigation works should be so located as to serve the best of these lands and that the water supply should be so distributed as to insure the utmost economy in its use. To do this it is necessary that a careful examination of the streams be made in advance of irrigation construction, and that these works should be built in accordance with an intelligent system and plan. It is further to the interest of the State that this should be done, since it is charged with the responsibility and expense of supervising these works after they are built and with the division of the water among the various claimants. Under the hap-hazard system which has heretofore prevailed, where there has been no limitation or supervision as to the number, location, and character of the works for diverting water, it becomes a practical impossibility to secure a just or satisfactory distribution of the water supply in a time of scarcity.

The ill results of this policy become more prominent the longer it is pursued. They are more notorious in Colorado than with us, and will be felt here in ten years far more than at present. It is a counterpart of the old land system, or lack of system, which formerly prevailed in this country and in some of the Eastern and Southern States, where each settler blazed out his domain according to his inclinations regardless of the boundaries or rights of his neighbors. The litigation and ill-feeling which followed as a legacy of this practice in Kentucky and other States promises to be repeated in our water-right troubles if some more enlightened policy be not adopted. That our system is what it is is not due to the lack of appreciation of its defects on the part of our people or the want of knowledge of a remedy. It is a system forced upon us by necessity, not choice. A Territory sparsely settled, with its resources undeveloped, was not in a situation to undertake any systematic public improvement or investigations, nor can we accomplish anything satisfactory towards this end with the public lands owned and controlled by the General Government. It is useless to make an investigation or examination as to the proper location of irrigation works while no control can be exercised over the settlement of the land.

The most satisfactory remedy for this state of affairs, and in my judgment the only efficient one, is for Congress to grant to each State of the arid region, or to each Territory upon becoming a State, all the irrigable lands within its borders held by the General Government, such State to be charged with the supervision of their reclamation and with their disposal to actual settlers.

The reasons for asking this donation were stated in a letter prepared by a committee appointed at a conference held in this city in July last, and I can do no better than repeat them here:

"First.—The reclamation of the lands of this region lays upon the people engaged and upon our local or State government requirements and expenses not encountered by the pioneer of the humid portion of the country. Not only does the construction of ditches and other distributing works add greatly to the first cost of a farm, but with their multiplication comes the necessity of the State assuming control of the distribution of the water supply, and its failure to do so leads inevitably to expensive litigation or to personal controversies which impair both the success and growth of our agriculture. A further incentive to prompt action is the fact that the area of land susceptible of reclamation exceeds the amount of water supply. The water, therefore, possesses a greater value than the land, and on its economical distribution rests the limit of our future agricultural wealth. It is of the utmost importance, therefore, that no wasteful or improper diversion be permitted, and that the State should control the appropriations of water as well as its subsequent division among the various claimants. The expense of this work must of necessity be heavy.

"In Wyoming there are already 2,500 ditches drawing their supplies from 400 water-courses, and this work is yet in its infancy. In Colorado, with its greater advancement, the single work of regulating the division of the water supply requires the employment by the State of nearly 100 men. This regulation is a necessity not to be avoided, but the preliminary examination of our streams and an efficient supervision of the construction of works to divert the water therefrom is of equal importance to our future welfare. In our present condition it will, however, be practically impossible for many of the States and Territories to provide means for this work by taxation, but the funds for its prosecution can be easily provided for in the disposal of the lands whose donation is asked.

"Second.—Our experience during the past five years has shown the evil growing out of the control of the lands being under one authority and the water under another.

"If this Territory could during the past five years have controlled the disposal of the irrigable lands within its borders, it could, while disposing of it to actual settlers only, have afforded such protection to canal companies as would have given our agriculture four times its present importance, and more than double our population. Instead of this there have been repeated instances where arbitrary and unreasonable rulings have subjected our people to heavy and wholly unnecessary expense, and to cause the whole land policy to be regarded as oppressive. It was, however, the inevitable result of land laws wholly unsuited to the needs of irrigation and of their enforcement by officials in Washington whose experience had not prepared them to deal with the conditions which exist here.

"It is also impossible for Congress to pass a general law which will operate with equal justice and success on the arid belt as a whole. The conditions differ in the different sections, as do our water laws. Wyoming differs from Utah, and Arizona from Montana or Idaho. The people of each section are the best calculated to determine the system best suited to their needs and should be given the means of carrying it into effect.

"*Third.*—The results already achieved are a sufficient guaranty of what can be accomplished under favorable circumstances. Our legislation as to water has, on the whole, been wise, but it can never have the stability or success which would come with the control of both land and water. Our engineering works have elicited the praise of experts from other irrigated countries for both their economy of construction and adaptation to their use. At present the practical knowledge of the subject is almost wholly confined to those engaged in the work. The information gained through the labors and investigations of the Geological Survey can be utilized by local legislatures, while by placing the responsibility for this work upon our people a great impulse will be given to the diffusion of intelligence on the subject and to local pride in the character of our irrigation works. It will put the solution of this problem in the hands of the people best informed on the subject and most interested in its success.

"We will say further that our people are afraid of the proposed withdrawal of the irrigable lands from settlement or the placing of the construction and control of our irrigation works under the charge of the National Government; the reason being in both cases that the delay and uncertainty which would be inseparable from such action would be disastrous. While the passage of laws to encourage individuals or companies to reclaim large bodies of arid lands would most speedily accomplish the desired end, namely, reclamation and settlement of the arid regions, yet public sentiment seems to be so adverse to this plan that we feel that it is scarcely worth our while to advance it."

The dangers attendant upon national legislation is shown in that clause of the law creating the irrigation survey which provides for the repeal of all land laws except the homestead act. This clause has met with the disapproval of all persons acquainted with the situation in this Territory. To limit the acquirement of title to the public lands to the provisions of the homestead act would be disastrous restriction on settlement, and there is no valid reason for its adoption. It offers no aid towards the construction of better works or the more economical diversion of water, the most important consideration connected with the whole subject. In this respect the desert-land law was the best ever enacted, if it had been liberally construed, or if the rulings of the Land Office had been uniform as to its meaning. The difficulty has been that the changes in the rulings have been of so radical a character as to practically constitute new legislation and to cause much hardship and expense to those honestly endeavoring to comply with the law. So onerous have been some of the restrictions that it has seemed as though the authorities regarded every claimant of the public lands as an object of suspicion who was guilty until proven innocent. It is time that a more sensible and just conception prevailed.

Every settler on these lands, which in their present condition have no agricultural value, and who reclaims them and makes them productive, is a benefactor of the whole country and should receive the most liberal treatment. Instead, however, after having expended from \$5 to \$15 per acre in bringing the water on his land and preparing it for irrigation, he is compelled to pay the same price therefor that the settler on the broad prairies of Iowa and Kansas paid for land already prepared for the plow. The commonwealths who are charged with the duty of guarding the public welfare should be aided in their efforts. Every consideration which justified and secured the donation of the swamp lands to the States of the humid region applies with greater force to the advisability of a similar donation of the arid lands to the several States and Territories interested. Not only are our local governments charged with heavy duties and responsibilities which none of the humid States had to confront, but the settlers who come here to engage in farming undertake the practice of an art whose mastery is both complicated and difficult and of which they have no previous experience.

Our climatic conditions are exceptional, making much of our agriculture and ex-

periment, and making certain that we are far from pursuing the best methods, or that we are achieving anything like the results which are possible. The local government should aid private effort by conducting experiments to determine the best methods and by disseminating information which will enable new comers to obtain their knowledge of the subject by some less difficult and costly road than that of experience. The success of irrigated agriculture enormously increases the value of the arid domain and will be an important contributor to our national wealth and prosperity. The best results can only be secured through the nation's aid. I trust it may be generously extended.

Respectfully submitted.

ELWOOD MEAD,
Territorial Engineer.

The SENATE COMMITTEE ON IRRIGATION.

WYOMING MINES.

The following is from a paper written by Dr. L. D. Ricketts, Territorial geologist:

THE WYOMING COAL FIELDS.

The Wyoming mines along the Union Pacific Railway now produce over 1,400,000 tons of coal annually, and the owners are actively preparing for a much larger output. The situation of these mines and their connection by railroads of easy grade compared to many of the Colorado lines, enable them not only to supply the large market west and east along the main line and its connections but allow them to send coal south into eastern Colorado, southern Nebraska, and northern Kansas, and for this reason there is room for a large expansion of their trade. But with the exception of a part of Montana they can never have a natural market in the district lying between the 95th and 115th meridians and north of the 42d parallel unless the region to the north of the railroad limits fails to supply good coal.

The demand for a cheap fuel in this region is constantly increasing, and has finally become so imperative that its supply will warrant a large outlay of capital. With the extension of the railroads of the northwest from the east and the consequent settlement of the country fuel was brought from the eastern mines with which the lines connected. It is only now that they have advanced so far westward that the opening of new and large coal mines has become a matter of necessity.

Although the available and convenient coal fields are not well known and developed, yet the large amount of preliminary exploitation already made has tended to show that coal fit for commercial use will have to be supplied by Wyoming.

Coal, in its broadest sense, is very wide-spread in its occurrence in Wyoming; it not only occurs in many separate fields, but these fields are usually of very great size. In the aggregate the surface actually underlain by coal-bearing strata can not fall short of 30,000 square miles. But some of this immense area lies so far beneath the surface that it is out of the reach of the miner, and of the remainder many thousand square miles are of little economic importance on account of the inferior quality of the coal, and the land is more valuable for agricultural (even as grazing purposes) than it will ever be as coal land. There remains, however, large areas of coal land capable of furnishing a practically inexhaustible quantity of excellent coal; and this not only includes the area controlled by the Union Pacific but other areas north of its line which can and will satisfy the demands of the northwest for a cheap fuel. The railroads will only be called upon to exercise ordinary intelligence in the selection of lands and to recognize the fact that they will have to go to good coal; it will not come to them.

There are several causes which render much of the western coal worthless. Among these are the presence of excessive amounts of water in the composition of the coal, of sulphur, and of ash. Water is objectionable because: (1) It causes the coal to slack and fall to pieces when it is subjected to the action of the atmosphere and the jar of transportation and handling. (2) It deducts from the amount of combustible matter in the coal. (3) It takes a portion of the heat of the coal to evaporate it. (4) It causes the coal to spark and fly to pieces when burnt. (5) It is generally associated with other deleterious constituents which deduct from the heat-giving power. Sulphur and ash are objectionable for obvious reasons.

Valuable empiric knowledge may be had by assaying coals by the method in common use and comparing the results obtained on samples whose practical value is known with those obtained on samples from new localities. Thus the less the invisible water the more the fixed carbon; the less the ash, the heavier the flame, the better the coal.

The following list of analyses will show what I mean :

No. of analysis.	Water.	Gas.	Fixed carbon.	Ash.	Flame.
1.....	5.75	42.13	44.34	7.78	Very heavy.
2.....	8.59	38.91	49.74	2.76	Heavy.
3.....	9.61	34.97	53.97	2.76	Do.
4.....	11.70	41.41	39.65	7.24	Light, sparky.
5.....	13.33	32.69	49.93	4.05	Do.
6.....	22.27	35.74	41.18	0.81	Very light and sparky.

No. 1 has the least moisture and will stand transportation better than any of the other coals. No. 2 has more fixed carbon and less ash but more water; it is an excellent proven fuel. No. 3 is equally as good as No. 2, but has never been shipped. No. 4 can be used as a locomotive fuel, but is less satisfactory than the preceding. No. 5 will burn readily when freshly mined. It slacks badly, will hardly stand transportation, and will not furnish much heat. No. 6 is a lignite, practically worthless for all purposes of trade.

As will be seen later, good coal, containing, let us say, less than 10 per cent. of moisture and possessing other desirable qualities, seems to be wanting in some fields, while in others both good and bad coal occur. I know of no field in Wyoming in which there is all good coal; no matter how good a large amount of the coal may be, every field has also its coal of inferior quality.

Besides quality there are other important conditions to be fulfilled before mines can be opened. Consequently the selection of lands suitable to mining purposes in all respects is no easy matter, and it requires skill and perseverance and time and money to do it. Systematic prospecting on the most economic plan is necessary.

It seems to the writer that the most reasonable method of prospecting embraces the following successive steps. These steps, which require a progressive expenditure of money, are as follows:

- (1) The discovery of coal-bearing strata.
- (2) The preliminary development of such lands to discover coal of good quality.
- (3) Continued development where good coal has been found to discover unbroken areas big enough to furnish a large amount of coal.
- (4) The purchase of such lands and the final development in opening up the mines and placing them in condition to produce and ship coal.

The first step is easily accomplished. The prospector has only to choose the coal fields most convenient to the market to be supplied, and to begin at once upon the second. The croppings, changed by surface action, indicate but little. The coal beneath the surface has to be reached. This may be done partially by examining the openings already made and by having new openings excavated as far beneath the surface as necessary. Usually the distance is not great, and the cost but a few hundred dollars. The third step is taken when good coal is found and not before. First, a careful study of the surface should be made. If this is satisfactory the land should be filed upon by a declaratory statement, which costs about 2 cents an acre and holds the right to it for one year. Then prospecting should be continued by openings along the coal croppings and diamond drill borings back from the crop.

The fourth step presupposes success in the previous three. The necessary quality and quantity is proven. Only now should the land be purchased, the mines opened by a system carefully planned to suit the ground, and connection made by rail between the mines and the market.

When the great outlay of capital necessary for coal mining is considered it may seem that such a simple and fundamental course as that here laid out would be well understood and that it was scarcely worth while to formulate it. But while such a course is adopted by some the writer could mention cases where large sums of money have been lost by ignoring it. Perhaps he could predict some failures for the future which will be due to the same cause.

With this, perhaps too long, introduction a brief description of various coal fields will be given. It is left to the discriminating power of the reader of the pages which follow to determine whether or not the assertions made and conclusions drawn have any justification in fact.

THE COAL LANDS WITHIN THE LIMITS OF THE UNION PACIFIC LAND GRANT.

Up to the present date but little coal has been mined and shipped from any places in Wyoming, except along the line of the Union Pacific Railway. No other road has built far enough into the Territory to reach the fields where good coal may be had.

The Almy mines.—Coal has been mined in the vicinity of Almy, in the southwest corner of Wyoming, for about twenty years. It occurs in very large seams, subdivided by bands of bone or slate, which are either left standing or separated from the coal after it is broken and left in the mine. The coal is used almost exclusively as a locomotive fuel; it does not answer well for domestic use. Most of it is consumed by the Central Pacific Railway, which, as well as the Union Pacific, controls mines in this locality. The Almy No. 4 mine, controlled by the latter company, has been abandoned during the past year, although only about one-fourth of the available coal was mined. A creep let air into a fire in the mine, and it could not be closed off effectively, and as the seam gives off fire damp it was considered unsafe to continue working it. The company is now opening a new mine, which, I understand, promises to be fully as good as No 4.

According to the report of Mr. Epperson, the inspector of mines, this district produced the following amount of coal during the year 1888:

	Short tons
Union Pacific mines.....	155, 267
Central Pacific mines.....	206, 613
Total	361, 880

*The Rock Springs mines.**—The Rock Springs coal fields are extensive; the coal is of excellent quality. It may be cheaply mined, cheaply carried, and there is a market for it both east and west. Already it is sold on the Missouri River and Pacific coast, in Colorado and Montana, and as yet the mines are in their infancy. The coal department is largely increasing the capacity of its five mines and new companies, encouraged by the policy of the railroad, are opening up mines, and the output promises to be quadrupled in a few years.

The coal occurs in the gray or whitish, coarse, massive, usually soft sandstones of the Laramie group. The croppings may be traced and the veins identified for a distance of 7 miles. Beyond this limit they are found at intervals along an approximately east and west line, but these seams have not been oriented with reference to those on which the mines are located. Early in the seventies much work was done upon the coal near Black Buttes, a station about 40 miles east of Rock Springs, but the mines were abandoned, either because the quality of the coal was not satisfactory or for some unknown cause. To the southwest croppings are found near Green River, but the quality of the coal has never been proven.

The outcrops at the mines pass in a northeasterly and southwesterly direction through the town, or upon either side of it, and the beds dip from N. 50° to 70° W., at angles varying from 6° to 20° from the horizontal. Following the surface in the direction of the dip the coal measures disappear under Tertiary rocks, which rise in a long abrupt-faced table-land called White Mountain.

Six workable seams upon which mines have been opened are known. There are many other seams so thin as to be unworthy of consideration. Owing to the fact that the workable seams are numbered after the name of some mine situated upon them there is no numerical sequence corresponding to the order of their succession. Thus, according to the Rock Springs nomenclature, No. 1 seam (on which No. 1 mine is located) is the fourth, No. 5 the third, No. 7 the fifth in order from the top. Consequently it is better for the purposes of this paper to name the beds alphabetically, beginning at the topmost vein with the letter A. The following table will show the thickness of the seams and the mines located upon them. The mines of the coal department of the Union Pacific are named by number:

Seam.	Thick- ness.	Mines.
	<i>Feet.</i>	
A.....	7½	Old No. 6.
B.....	7	Old No. 5.
C.....	4½- 7	No. 3, new No. 5.
D.....	9-11	No. 1, No. 4, Rock Springs Mining Company No. 1.
E.....	4½- 7½	No. 7, No. 8 shaft, Hopkins, Rock Springs Mining Company No. 2.
F.....	4	Van Dyke.

Seams A and B are no longer worked. The quality of coal was not satisfactory in old No. 6. In old No. 5 there was too much slate. This does not preclude the latter

* The writer is indebted to Mr. G. L. Black for many facts and figures concerning the Rock Springs mines,

seam from affording valuable mines at other points. Excluding A the total thickness of the coal of the remaining five seams average about $33\frac{1}{2}$ feet. That is they are capable of producing about 40,000 tons of lump coal to the acre, or 25,000,000 to the square mile.

Distances between the seams.

	Feet.
A and B	400-500
B and C	220
C and D	225
D and E	300
E and F	200

This leaves a distance of about 1,450 feet vertically between A and F.

The dip of the formation varies between 6° and 20° , but the changes are gradual, and a uniform pitch is usually maintained for long distances. Small faults from 2 to 20 feet are not uncommon. The fault with the greatest displacement (65 feet) passes in a northerly direction between No. 1 and No. 4 mines. The walls are well adapted to mining. The roof seldom shows more than 1 foot of shale before the massive sandstone is reached, and the old soil of the floor is firm and not deep. Consequently the exploitation of the mines is simple, and may be, and is, accomplished cheaply.

Rock Springs coal is celebrated as a fuel for domestic, steam-making, and furnace uses. When intensely heated in a closed vessel it will cake, but it does not make a marketable coke. It contains more fixed carbon and less ash than any other Wyoming coal at present mined. It contains usually but little slate, and that may be easily separated in mining. The quality of the coal extracted from the various mines is about the same, and none can claim any striking superiority. The average specific gravity of the coal, as given in the table below, is 1.301. This table will show the quality of the Rock Springs coal. The samples were taken by carefully sampling the coal obtained by picking a groove from the roof to the foot of the various breasts. The coal was analyzed two weeks after the samples were taken, and consequently the water contents are a little high.

No.	Water.	Volatile matter.	Fixed carbon.	Ash.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1	9.05	40.00	48.87	2.08
2	9.22	38.78	49.51	2.49
3	8.58	37.82	49.73	3.87
4	7.51	39.96	50.84	2.59
5	5.65	39.86	50.28	4.21

1.—Rock Springs Coal Department, No. 4 mine. 2.—Rock Springs Coal Department, No. 7 mine.
3.—Rock Springs Coal Department, No. 5 mine. 4.—Rock Springs Mining Company, No. 1 mine.
5.—Rock Springs Mining Company, No. 5 mine.

It is a matter of regret that no samples were taken from the Hopkins and Van Dyke mines. I understand that both mines are producing an excellent quality of coal.

The following table, compiled from various sources, shows the total production of the Rock Springs mines to 1888, inclusive:

	Long tons.
1868 to 1885, inclusive	2,703,994
1886	359,338
1887	465,444
1888	766,197

Total

4,294,973

During the past calendar year the capacity of the mines has been largely increased, and it is intended to at least double the capacity during the next twelve months. The present output of the mines per day of ten hours is said to be as follows:

Name of mine.	Capacity.	Name of mine.	Capacity.
	<i>Long tons.</i>		<i>Long tons.</i>
Coal Department:			
No. 1	800	Rock Springs Mining Company, No. 1	300
No. 2	800	Hopkins	200
No. 3	800	Van Dyke	125
No. 4	400		
No. 5	500	Total	3,925

In other words, the Rock Springs mines are now in a condition to produce coal at the rate of 1,200,000 tons per year without drawing upon their reserve too rapidly.

The Carbon mines.—The Carbon mines, like those of Rock Springs, are directly upon the line of the Union Pacific Railway. The coal land is broken by a series of faults into a number of separate areas. Each of these areas that is conveniently situated has a mine, producing or worked out, upon it. The Carbon coal was celebrated as a locomotive fuel, capable of making an intense and large amount of heat, and for such use was the best in Wyoming. Now, however, the old mines are practically worked out, and unless new ground is opened up, the town will be abandoned in a few years at most. The owners have foreseen the exhaustion of these mines, and prepared for it by opening new ones.

The Dana mine.—One of these new mines is at Dana, 20 miles west of Carbon. The entrance to the main slope is within a few hundred feet of the railroad. The croppings of the seam have been traced for several miles. At the opening the dip is about 35° to the northeast. The slope and air course are each down about 700 feet from the surface, and entries are being driven. The capacity of the mine will be fully 1,000 tons of coal per ten hours.

Two analyses of this coal, taken from a little over 100 feet down the slope, gave these results:

	1.	2.
Water	11.70	11.30
Gas	41.41	42.01
Fixed carbon	39.65	39.69
Ash	7.24	7.00

This coal is not as good as the old carbon coal. It slacks more and makes more sparks when burnt. The ash also is high. The active work upon the mine was begun when it was thought that the policy of the railroad would be against building to the better coal lying 6 miles to the north.

The Hanna Mines.—Chimney Springs are said to be so called on account of the smoke from a burning coal bank that escaped from a small hill above them when they were first discovered. It has long been known that there was coal in this region. Over a year ago the owners of the carbon mines began to prospect the croppings, and found that while some of the coal was of rather poor quality there was also a number of veins that furnished excellent coal.

Intelligent prospecting developed the fact that good coal was there in abundance, and a new series of mines are being opened and a branch track over 20 miles in length being built from the main line at Medicine Bow. The town at these mines will be called Hanna.

Three veins of coal, each over 15 feet thick, and a number of others large enough to work, have been discovered. The best among these are being developed. The work already done is not sufficient to allow any estimate of the amount of coal this district is capable of furnishing. It is sufficient to say that it would certainly take years to exhaust it should all the coal used in America be taken from it. The coal is clean, and contains a low percentage of moisture. It does not slack, and promises to make not only an excellent locomotive fuel, but to prove superior as a steam-maker generally and for domestic use. It will be seen that the fixed carbon is low.

	1.	2.
Water	7.64	8.43
Gas	45.89	45.88
Fixed carbon	45.11	41.46
Ash	1.36	4.23

These two samples come from No. 1 mine, and represent two different looking kinds of coal from the lower 8 feet of a vein 17 feet thick. It is this part of the vein that will be mined.

The value of the unprospected area within the Union Pacific land grant is unquestionably very great. The coal-bearing rocks extend both north and south of Rock Springs, and occupy a large area of that region, while in Carbon County it is no exaggeration to say that nearly half the land is underlaid by coal. North of Fort Steel, on both sides of the Platte River, there are large areas that I judge to be unbroken which would probably yield excellent coal and immense quantities of it,

South of the railroad there are also important though smaller undeveloped areas. Some of this land is now being carefully prospected by the most competent people, and in case the search is successful there will probably be another railroad built to it.

COAL LANDS WITHOUT THE RAILROAD LIMITS IN CARBON AND FREMONT COUNTIES.

But north of the Union Pacific Railroad limits in Carbon County there are important coal areas, which in my opinion are capable of supplying good coal in large quantities.

Rawlins Mountain is the crest of an uplift which has thrown strata far older than the western coal measures above the level of the surrounding country. The strata dip radially away from the center of this uplift, and at the base of the mountain the older rocks pass beneath the surface and make room for the younger, until finally the coal-bearing strata appear at distances inversely proportionate to the angle of dip. To the south of the dip is steep, and coal seams are found a few miles from Rawlins. To the east and west they only appear 12 or 15 miles from the town, while to the north, toward Whisky Gap, they do not appear for 30 miles; in other words, the Rawlins Mountain uplift forms, so to speak, a great elliptical island of older rocks, about which the coal measures outcrop.

This leaves a rudely semicircular line of outcrops of coal veins north of the railroad limits. Passing from the limits in township 24, range 90, the croppings extend north through township 25, range 89, north and east through township 26, range 88, and thence in a rudely southeasterly direction to township 25, range 85, and beyond into the Coal Creek basin, again within the railroad limits.

In townships 25 and 26, ranges 89 and 90, the coal-bearing rocks dip to the west and northwest until they disappear beneath the younger rock, and even to Muddy Gap they unquestionably underlie a large area. From the latter point southeast the width of the belt is limited by the Ferris and Seminole Mountains, which are made up of rocks older than those which carry the coal.

A little work has been done along the line of croppings described and has developed the fact that there is good coal in this district as well as some that is not good. Some of these will be mentioned.

Near Bull Springs there is an opening 30 feet in length upon one of several seams of coal. The seam is between 6 and 7 feet in thickness. I have not yet made analyses of the samples taken by myself. A sample given me gave the following results:

Water	9.31
Gas	34.97
Fixed carbon	53.97
Ash	1.75

In looking at the opening afterwards I could not but think that the ash would be somewhat higher if a careful average sample were taken. Still I consider the prospects for quality at this locality excellent. The analysis shows the coal to be fully as good as that of Rock Springs.

From this point the croppings of large undeveloped seams may be followed for over 15 miles, where there is another opening that was not far enough in to show more than promising prospects for good coal.

Continuing westward along the croppings we reach the Muddy, a sluggish stream which flows into the Sweetwater River. Considerable development has been done upon several of the coal veins which outcrop on certain branches of this stream and at points which are all less than 15 miles from the Sweetwater. The analyses of samples of this coal show that it is not fit to supply the northwest trade, and that the land will be of little value as coal land unless other and better seams are discovered. They are:

	1.	2.	3.
Water	13.13	13.61	14.30
Gas	35.57	36.00	34.42
Fixed carbon	45.40	46.24	40.03
Ash	5.90	4.15	11.25
	100.00	100.00	100.00
Flame	Light, sparky.	Light, sparky.	Light, sparky.

Passing southeast from the last locality along the base of the Ferris Mountains the surface is largely covered with sand hills, and is wholly unprospected. It is only

after the divide between Sand Creek and a tributary of Hurt Creek is passed that coal croppings with some development upon them are to be found. These coal lands extend from the base of Bradley's Peak southeast along the base of the Seminoe Mountains to and across the Platte River. From the river westward the coal lies in a synclinal basin, and outcrops in two parallel lines. Towards Bradley's Peak this simple structure is complicated by a system of faults which are imperfectly understood.

The coal seams of this region have been opened at a number of points, all north of the railroad limits. Only a few of them will be mentioned.

The westernmost opening is above the Fieldhouse ranch, where a tunnel has been run in by ranchmen upon a 7-foot vein. A thin layer of clay (from 1 to 6 inches) shows in places about 2 feet from the roof of the vein; otherwise the coal is perfectly clean.

The Penn Mining Company own some land 2 or 3 miles below the Fieldhouse bank. They have opened the vein through a slope. The coal is about 5 feet thick, and uniform in character. It does not slack, as evidenced by a pile at Seminoe which has lain in a shaft-house over a year.

The third opening is at a point about 2 miles above Miller's ranch. There are here two veins about 50 feet apart, each 12 feet thick. Gopher holes indicate the presence of other veins in the same group; but these have not been opened up. The first work done here was upon the upper of the two veins. A slope was run for 100 feet or more nearly upon the strike of the coal and a shaft was sunk for ventilation. The roof of the slope caved about eight years ago, and no work has been done upon the vein since. The coal was examined through the shaft. Although untouched for eight years and with each winter's snow filling the shaft and melting, the walls still stand firm and unslacked, although much altered by contact with air and water. No analysis of the coal was made because of this change; but from its appearance it is believed to be of excellent quality. When the first slope caved the lower vein was opened in a similar manner. The coal is reported to be inferior to the upper vein in quality. Notwithstanding, it is certainly the best coal now mined in Carbon County. With the exception of a thin streak of bony coal (2 to 4 inches) near the foot of the vein, the coal is perfectly clean. It shows no iron pyrites, is bright, close grained, and breaks into cubical blocks when struck with a hammer. The dip at the Miller bank is between 50° and 60° . At the two localities described immediately preceding the dip is not over 10° .

The three following analyses will show the composition of these coals:

	1.	2.	3.
Water	9.62	9.40	11.42
Gas	36.93	36.90	37.87
Fixed carbon	51.12	47.30	48.54
Ash	2.33	6.40	2.17
	100.00	100.00	100.00

No. 1.—Miller opening, 12-foot vein. No. 2.—Pen Mining Company opening. No. 3.—Fieldhouse opening.

It is a matter of regret that time and space will not permit a fuller description of this very important field north of the railroad limits. That good coal occurs here is proven; that it occurs in quantity on the west and north sides seems almost certain. In the Hurt Creek basin the size of the deposits will have to be determined with great care. The entire area is accessible by easy grades from the Sweetwater River. It will be seen also that this is probably the only field east of the continental divide where a railroad up the Sweetwater can get a coal well fitted to the demands of commerce.

THE COAL-FIELDS OF NORTHEASTERN AND CENTRAL WYOMING.

The Powder River coal area.—The coal area of this region is immense. One great field occupies the basin between the Black Hills and the Big Horn Mountains, and extends from far within the confines of Montana to and across the North Platte River. This field, called for convenience the Powder River coal-field, occupies about 15,000 square miles of the surface of Wyoming, and is capable of producing many thousand million tons of coal. The same or different seams may be seen outcropping every few miles, so that it is very easy to get to the coal, and the numerous settlers have almost always a cheap and convenient fuel near at hand—a very important circumstance when it is remembered that wood of any kind is often scarce. But even where

wood is abundant coal is usually preferred. In Johnson County, near Buffalo, there are two small mines that supply the town and military post. Similar mines are opened near Sheridan. Many other openings of small extent supply individual settlers who do not file upon the land because coal is so abundant. But, as far as known, the coal of this district has little other use than that of supplying a local market.

The present discoveries do not warrant a belief that it will supply a fuel that will stand transportation and do the work that commerce demands. As long as the transportation amounts to but little, and it does not make a great deal of difference whether it takes 6 tons or 10 to last a family through the winter, this coal will answer, but when the value is enhanced by the cost of transportation better coal is required. For this reason, except for local consumption, coal mining in the Powder River coal-field, along the line of the Elkhorn and Missouri Valley Railroad, has not proved successful. Certain people took up and bought about 3,400 acres of land on Shawnee Creek near this line, and made expensive developments, only to find out that their coal would not answer the purpose of trade and that the money they had invested was a dead loss. Two other mines have been opened up further west immediately on the line of the railway. With the advantage of very low rate they are able to sell a few thousand tons yearly in the northwest, but they can not sell enough to warrant the belief that they will make large mines. This prediction does not seem unwarranted when we consider the fact that the railroad company hauls Iowa coal to the Glen Rock and Deer Creek mines to draw back those fuels to the eastern markets.

The Rattlesnake coal-fields.—This area lies north of the Rattlesnake Mountains, and extends from the North Platte River, below the mouth of the Sweetwater, northwest nearly to Lander. A large portion of this field is covered with younger rocks, which cover up the coal croppings. The coal, like that of the Powder River field, is a lignite, which is serviceable to the ranchers as a convenient fuel, but which, as far as known, does not produce coal suited to the purpose of trade. The western portion of this field, which includes the coal-seams near Lander, is excepted from this statement. I am not yet prepared to speak of it.

THE COAL-FIELDS OF NORTHEASTERN CROOK COUNTY.

The great foot-hill table-land or mesa of the Black Hills in Wyoming, cut by deep more or less precipitous cañons, but otherwise standing up above the surrounding country, consisting essentially of hard, coarse-grained sandstones and fine conglomerates of white and yellowish colors, overlaid at the base by dark-colored shales, underlaid by light-colored clays and other variegated strata, can not escape the notice of the most careless observer.

Owing to the difference in hardness from the rocks below it, the mesa has a tendency to present a bold escarpment towards the center of the hills. Owing to this at first nearly horizontal position of its strata, it slopes but gently outward until the final steeper inclination of the strata causes it to pass down to the level of the plain at a slope entirely dependent upon the angle of dip.

This prominent mesa is composed of what is known as the Dakota group of rocks. Recently new discoveries of coal have been made in it, and for this reason it is now of special importance.

Area.—It is here sufficient to say that the Dakota groups of rocks in Crook County extend from a point on the South Dakota line southeast of Jenney's Stockade in direction west of north through townships 45 and 46, range 61; townships 47 and 48, range 63, and township 51, range 66. From thence onward it passes northward around the west side of Missouri Buttes. The belt thus described varies considerably in width but will average fully 6 miles. Besides this the Dakota forms the surface rock over a large portion of the territory lying between the north side of the Bear Lodge Mountains and the Belle Fourche River.

Allusion has already been made to the cañons which cut deep into the mesa. This applies not only to those of the large streams, but to innumerable branches which come in from all directions. These cañons are so deep that they all cut down through the coal veins and expose them outcropping on either side, and in the majority of cases they even cut entirely through the Dakota rocks and into the Jurassic clays. So frequent and near together are they in places that they do not leave areas of unbroken ground sufficiently large for mining purposes. It is only in those places where there are few cañons that large pieces of ground are left with uninterrupted coal-veins beneath them.

Further, although there are few places where the Dakota does not show some indications of coal, there are many where the veins are too thin or impure to work. As a consequence there is a very large portion of the area in question that will prove unproductive, and it is only where good coal is found underlying large areas and in veins sufficiently thick that mines will be eventually opened.

In spite of these very considerable limitations there are large, unbroken tracts of land, as yet unprospected, that may or may not afford mines. The few openings now

to be mentioned only mark a beginning of the search for good coal in the Dakota rocks of Crook County.

The qualities which render this coal desirable are: (1) They contain less moisture than any other coals yet discovered. (2) They do not slack. (3) Some of them coke. The difficulty will be to find the coal possessing these qualities and also having a low percentage of ash. The ash and in some places the sulphur are the chief drawbacks.

Important development work has been made on Hay Creek, north of the Bear Lodge Mountains, in township 54, range 61; at the Brier Hill Bank, on Skull Creek, in townships 47 and 48, range 63, and at the Mount Zion mines, in township 46, range 61.

The Hay Creek mines.—As a result of the necessity for good fuel at the Black Hills mining towns, a search for coal was instituted long ago, and the Hay Creek veins were discovered over ten years since. To-day several slopes have been run in on the coal. Some of these have caved in on account of insecure timbering and the unsatisfactory character of roof and floor. The Barrett and Fox mine is now cleaned out. These workings expose two veins of coal lying about 20 feet apart, and separated by fire-clay and sandstone. The bottom bed lies about 30 or 40 feet above what I consider the top of the Jurassic formation. Each of the veins appears to be about 4 feet thick. At a point about three-fourths of a mile west of the Barrett main opening the lower vein is said to be 7 feet thick. * * *

The following analyses were furnished me by Mr. Barrett, the first two being made by the chemist for the Chicago and Northwestern Railway, the last by Mariner & Hoskins, of Chicago:

Constituents.	1.	2.	3.
Water.....	8.18	8.74	9.02
As.....	41.95	41.20	39.90
Fixed carbon.....	40.12	39.91	39.74
Ash.....	9.75	10.15	11.34
Total.....	100.00	100.00	100.00

In the latter part of July some other men were prospecting in the Jurassic clays south of the openings already described. They found a streak of carbonaceous matter along the bed of the creek, which they followed in some distance, and at that time they were sinking a shaft below it through fire-clay, containing pieces of wood that had been partly changed to coal and the remainder petrified. There is a rumor that they finally struck a vein of coal in their shaft.

The Brier Hill Coal.—Two tunnels, each 60 feet in length, have been run in upon the coal vein underlying this property. The discovery tunnel shows the vein to be feet 4 inches thick, of which the upper 6½ feet is chiefly of dull, lusterless color, and has a brown streak. The bottom 2 feet is bright, fine-looking coal.

The other tunnel, situated a few hundred yards distant, shows the vein to be here only 6½ feet thick, of which the upper 18 inches is of dull color, then 3 feet 4 inches bright coal, and the bottom streak of duller color.

Analyses of this bright-looking coal show it to contain a very large amount of gas, low percentage of fixed carbon, and a low percentage of moisture.

Water.....	5.25	5.75
As.....	41.70	42.13
Fixed carbon.....	44.98	44.34
Ash.....	8.07	7.78

These samples are from selected pieces which were sent me from Crook County about two years ago. My own samples give the following results:

Constituents.	1.	2.
Water.....	6.81	8.11
As.....	35.66	30.31
Fixed carbon.....	40.81	42.28
Ash.....	16.62	19.30

It will be seen that the general average of the vein in the two tunnels (Nos. 1 and 2) is unsatisfactory in that the percentage of ash is very high. No. 3 is the best. It represents an average of the 3-foot 8-inch streak in the center of the 6-foot 4-inch breast. A streak of this thickness would pay to mine if it were uniform. I fear from the nature of things that this streak will be irregular.

The Mount Zion mines.—This locality was visited in July last. The writer was treated with every courtesy by those in charge, and wishes to here express his appreciation of the kindness shown him.

<i>Sandstone.</i>
<i>Shale.</i>
<i>a 0.85</i>
<i>b 0.25</i>
<i>c 0.6</i>
<i>d 0.7</i>
<i>e 4.3</i>
<i>f 0.3</i>
<i>g 0.7</i>
<i>Fire Clay.</i> <i>Sandstone.</i>
<i>Jumbo Seam.</i>

These mines are situated in township 46, range 61. The Jumbo Claim is in the center of section 29, the Antelope is contiguous upon the west. The other coal claims adjoin. The owners have and are investing large sums of money. Besides the developments actually made upon the coal seam they have purchased about 6,000 acres of coal land, freighted in and set up a large saw-mill, graded many miles of wagon road, built many houses, located a town site, made hundreds of thousands of bricks, and brought in and set in place an expensive mining plant of the most improved type. In addition to this the Burlington system is extending its Broken Bow branch about 200 miles in order to connect with the mines by the time they are ready for

production. When the mines are opened and ready to ship coal and the railroad connection completed the total outlay of money can not fall far short of \$2,500,000. Consequently, the success of these mines is a matter of great importance to those who have invested this money.

Prospecting in the vicinity of the Mount Zion mines was commenced nearly two years ago. At first the results were so unsatisfactory that the search was nearly abandoned. The coal seams found were thin and impure—nothing more nor less than slate. About section 29 the outcropping coal had been mostly burnt. But one point was found that the old fire had spared, and the discovery was made here which has led to the investments described. A point was selected to the west of this discovery, where a gulch several hundred feet deep, running east of south, cuts down through the coal and leaves the seam outcropping on either side about 55 feet above the water channel. Two mines are being opened here, the one on the east called the Jumbo, the one on the west called the Antelope. They will each have a capacity of 100 tons per hour. The coal was found to be burnt back of the crop for a distance of 200 feet. When the fire had worked back this far the whole mass of the overhang hill caved in and smothered it out. The following were the developments that I saw at the mines: (1) The Jumbo discovery tunnel which starts at the croppings and follows the vein in 78 feet along the floor, 69 feet along the roof of the seam. (2) The Antelope air-way, which strikes unburnt coal 200 feet in and passes 12 feet into it. (3) Two small prospect tunnels run, one for each mine to determine the level at which the output tunnel should be started. These pass through the burnt zone but do not enter into the coal far enough to show its quality. (4) A similar tunnel about 300 yards up the gulch from the Antelope main entry. (5) The Antelope output tunnel and the Jumbo air-way and output tunnel, none of which had reached the solid coal in July. (6) Certain short tunnels on the crop of the vein in various gulches, none of which showed solid coal. Of these workings, aggregating not more than 1,200 linear feet of tunnels, only two showed the solid vein. These together were in solid coal for a distance of less than 75 feet.

Before describing them it may be well to mention how the samples for analysis were taken. A suitable point was selected as near the face as practicable and a tape hung from the roof to the floor. Then the various bands in the vein showing any visible difference in appearance were measured and marked off by small pieces of white clay stuck to the face. Each band and its thickness were entered in a note-book and lettered. Then samples were taken as judgment directed. In taking a sample a cloth was spread on the floor and a groove of uniform width and depth was made vertically across the bands to be assayed. These pickings were crushed and carefully quartered to a convenient bulk.

The Jumbo discovery tunnel is 69 feet under cover. The vein is 7.7 feet thick. Over the coal there is little more than 1 foot of compact slate with sandstone above it. Below the coal there is found 2 to 6 inches of fire-clay and then white sandstone.

The cut represents a diagram from my note-book. The letters represent the various bands distinguished, the figures their thickness in feet and decimals of feet.

Streaks A, C, E, and G are bright-looking coals, of usually uniform texture and luster; B and F are shales of grayish color; D is streaked in appearance, having irregular bands of coal alternately bright and dark. I was informed that it was the intention to mine the coal by machinery and to cut in on streak G and shoot down from streak A, and in breaking up the coal to throw B and F aside. From analyses of coal similar to streak D from the Antelope, I think that this will not yield good results. And in my opinion only streaks E, F, and G will be mined, of which F will be thrown out. I took two samples of this streak, one from a point 33 feet under cover and one from a point 5 feet from the face. The analyses gave:

	1.	2.
Water	5.17	8.10
Gas	41.40	42.57
Fixed carbon	39.98	37.51
Ash	13.45	11.82

No. 2 was kept in an air-tight bottle for a certain purpose. It will be seen that the moisture is higher than in No. 1, which represents the coal as it would arrive upon the market. I have not yet made other analyses taken from this opening.

The next cut is a similar representation of the vein as exposed in the Antelope air-way. Streaks A, C, E, and G represent the cleaner coal. Streaks B, F, and H the shale, and streak D a band of so-called bony coal. It will be seen that the two sections closely agree with each other, only the bottom streak is thicker and a new streak of bone (F) has appeared in the Antelope tunnel.

The following are analyses of samples taken from the Antelope :

	1	2.	3.	4.
Water	5.86	6.44	6.56	3.32
Gas	42.17	39.75	37.96	38.94
Fixed carbon	42.22	41.34	40.09	31.73
Ash.....	9.75	12.47	15.39	26.01

These analyses represent samples of the following streaks :

No. 1.—Streaks E to I, inclusive, except F and H.

No. 2.—Streaks A to I, inclusive, except B, F, and H.

No. 3.—Streaks E to I, inclusive.

No. 4.—Streak D.

<i>Sandstone.</i>
<i>Shale.</i>
<i>a 0.6</i>
<i>b 0.4</i>
<i>c 0.6</i>
<i>d 0.8</i>
<i>e 1.1</i>
<i>f 0.1</i>
<i>g 1.5</i>
<i>h.0.35</i>
<i>i 2.45</i>
<i>Fire Clay.</i>
<i>Sandstone.</i>
<i>Antelope Seam.</i>

There can be no doubt but that specimen samples showing far less ash, and equally as good in all other respects, could be taken. In fact, I have made analyses in which the ash was not over 7 per cent., but the analyses given above represent averages. In my opinion it will be necessary, unless the quality of the seam greatly improves, to abandon all streaks above E and throw aside F and H. Otherwise the percentage of ash will be great. While the ash in these coals is high the moisture is low, and if we add the percentage of gas and fixed carbon together it will be seen that the total combustible matter does not compare unfavorably with the Union Pacific coals. Further, this coal will probably yield more heat to the per cent. of combustible matter than the others.

If the most conservative view of the portion of the vein to be worked is taken, each opening shows about 5 feet of clean coal and from 4 to 5 inches of slate, and if we infer that a large area contains upon an average a like thickness and grade of coal, the vein will yield over 3,500,000 tons to the square mile. This question of continuity in thickness and quality is an exceedingly important one. * * *

With the latter field the writer has mentioned all the coal areas in Wyoming which he has personally inspected. He has not yet examined the unquestionably large areas of southern Albany and Carbon Counties, which he understands are of great promise, nor the coal fields of Uinta County and the Big Horn Basin. Although he has heard reports and rumors of excellent coals in all of these large fields, he is as yet unable to report upon them, for the want of personal knowledge. Consequently, unless it is remembered that this paper upon Wyoming coal fields is incomplete and that it leaves out large and promising areas completely, injustice will be done the subject.

The development of Wyoming coal fields is in its infancy. No one knows their merits, no one knows their capabilities to produce good coal. It is only known by the little that has been done that careful and intelligent search will render the selection of good lands easy and inexpensive. That the careless and hasty selection of such lands by persons ignorant of the occurrence of western coals will usually result in failure and the loss of large sums of money to the investors, and in injury to the good name of Wyoming.

PETROLEUM FIELDS.

This subject was treated quite fully in the report of the geologist made to the tenth legislative assembly and published in the spring of 1888. This article is a very brief summary of chapter there given, with fuller description of a new district.

The first discovery of natural oil springs in Wyoming dates back at least 25 years. In 1863 oil was collected from a spring near Poison Spider Creek, and sold along the Mormon trail, for axle grease, and a few years later it was collected from springs near Hilliard, in southern Uinta County and sold as a lubricant to the newly opened Wyoming coal mines.

But it has only been during the past decade that the oil fields have attracted any considerable attention; during the past five years that any borings have been made for oil. It is only now that they are deservedly exciting the interest of Eastern capital and that wells are being drilled in various places. Petroleum is found in numerous escapes in Uinta County, near Hilliard and Fossil; in Fremont County, near Lander, in Dutton Basin and on the Stinking Water River; in Carbon County, along the base of the Rattlesnake Mountains, on Salt Creek and the South Powder; in Johnson County, on the South Powder and the No Wood Rivers; in Crook County, at various points bordering the foot-hills of the Black Hills Range and Bear Lodge Mountains.

In all but one of the localities mentioned no intelligent prospecting has been carried on, and it has not been proven whether the oil exists in large quantities or not. A number of wells have been drilled and much money expended, but, with the important exceptions to be mentioned below, the prospecting companies have been too ambitious or too careless, or both, and, instead of sinking shallow wells at first and venturing deeper as the findings would warrant, they have selected points where the "oil sands" are so far beneath the surface that they have been unable to reach them.

The most important oil field, and the only one at all developed, lies near Lander, in Fremont County.

The three wells sunk on the Popoagie all struck oil. At this place there is a small oval valley surrounded by abrupt, often precipitous hills, over which at various points he found both oil and gas escaping. A good flow of live oil was encountered in each. These wells, which varied in depths from 350 to nearly 800 feet, were cased and supplied with valves to prevent the oil from escaping, but owing to the great gas pressure a large leakage can not be prevented—a pressure so great that upon suddenly opening the valves the oil spurts up like some black-watered geyser for 75 feet into the air. After the pipe thus clears itself the steady flow of oil is resumed, which, it is variously estimated, will aggregate from 600 to 1,000 barrels per twenty-four hours.

As these wells are about 100 miles from the nearest railroad, no oil has been shipped

on account of the expense of transportation, and that oil which escapes in spite of the valves is wasted and drains into several large ponds, where there are always thousands of barrels of oil collected. Its presence is indicated long before the ponds are reached by the strong but not disagreeable smell of escaping gas.

In color this oil is black. When fresh it contains a very large amount of absorbed gas. It will yield both illuminating and lubricating oil of excellent quality when distilled, and a residue which will be used as fuel for steam-making just as the residuum from the Colorado refineries is used under the boilers at the Leadville shafts.

The Shoshone wells yield oil from the top of the Carboniferous formation. The rocks dip steeply into the ground both towards and away from the mountains respectively on either side of the river, but lie flat along a narrow belt, parallel to the range, and situated where the dips change. This belt passes from Beaver Creek to the Big Wind River, a distance of about 60 miles, of which over 40 miles lie within the Shoshone Indian Reservation. The oil horizon lies at various distances beneath the surface along this strip. It is never less than 500 feet beneath the ground, and never exceeds 2,000. Oil springs are found on it in a number of places.

In purchasing or locating lands, care should be taken to keep on this belt, which might be called a zone of minimum depth. On either side of the red sandstone belt, and at short distance from it, the oil-bearing rocks are so far below the surface that it is scarcely practicable to try to reach them with a drill. There are claims located, and several times sold, on which it would be necessary to sink a well much more than a mile in depth in order to penetrate the known oil horizon.

Two new wells are being bored in the Rattlesnake district. One of these will have to be sunk to a depth of over 2,000 feet before the Dakota rocks are reached. The other, which is wisely located for a prospect well, has penetrated the upper Dakota sandstones. This rock was saturated with oil, but no appreciable yield was obtained from it. They are now sinking to prospect the lower sandstones.

Unfortunately for the district, the prospectors, with one exception mentioned, have tried to sink deep wells, which they have been unable to complete. Had they begun with shallow wells they would long ago have determined whether or not there were any merits in the district beyond surface indications, and either abandoned the search or ventured deeper with accurate knowledge of the way to drill in this different ground, and some tangible assurance of success.

I understand that promising results have been obtained from borings near Fossil, in Uinta County. But the driller is here presented with peculiar difficulties which he has as yet been unable to overcome.

The district in the vicinity of township 49, range 91, on the Norwood River, has not been visited since the boring of wells was commenced. The oil fields of Crook County were hurriedly inspected last August. As they have not been previously reported upon, a fuller description of them will be given.

The petroleum is found at many points as a stain in certain sandstones and even saturating such strata to such an extent that the oil seeps forth in springs. All of the oil yet found is heavy, green in color, and makes an excellent lubricator. The amount of illuminating oil it would yield is insignificant. The largest spring is in the SW. $\frac{1}{4}$ of the NE. $\frac{1}{4}$ of sec. 25, tp. 45, R. 62. The oil drains out of a porous sandstone of the Colorado group of rocks. There is a pit dug in the croppings of this stratum into which the water and oil collects. It will yield several gallons of oil daily. This oil is olive green in color by reflected light, brown by transmitted light. It has a density of $22\frac{1}{2}^{\circ}$ Baumé. It is a superior lubricator. At the spring the strata dip from 15° to 20° SW., but further out the dip rapidly increases to over 45° .

North of the Belle Fourche River, in the SE. $\frac{1}{4}$ sec. 27, tp. 52, R. 67, the same stratum of sandstone, here much thinner than at the point just described, yields seepages of oil. The pit upon this quarter-section, when newly cleaned out, is said to yield about 90 gallons of oil per month. The oil rock dips about 12° west. Further out the dip appears to grow less.

A number of wells have been sunk in this vicinity. The Standard well, which, through chance or intention, is excellently located for a prospect well, was sunk about half a mile west of the line of outcrop of the oil sandstone. It struck this stratum at a depth of 296 feet, and pierced it 306 feet. It yielded to the pump about 20 gallons of oil in twenty-four hours. Several very shallow wells sunk along the line of outcrop got very small amounts of oil.

The Great Northwestern well was started at a point about 5 miles south of the Standard, on the south bank of the Belle Fourche. It never pierced the main oil stratum because this rock outcrops to the south of it. At 155 feet a very small amount of oil was obtained from a stratum in the Dakota sandstones. From thence down to a depth of 930 feet it passed through the Dakota, Jurassic, and Upper Triassic sandstones. The money spent upon this well was little better than thrown away.

Two miles to the south of the Great Northwestern well the Rapid City well is now in the process of sinking. At a depth of 750 feet it had not yet struck the oil sand.

It is my belief that this field may develop into a small oil district. The oil is a

superior lubricator and will be valuable if obtained in quantities. The Standard well was sunk in the proper place, and the other work should be confined for the present, at least, to the same neighborhood, only the wells should be started further out from the cropping of the oil-bearing stratum. The indications are that this rock could be reached for a distance of several miles from the line of outcrop.

SOLUBLE SALT DEPOSITS.*

Soluble salts of two of the metals, sodium and magnesium, occur in extensive deposits in Wyoming. They are found in basins of small area which have no outlet for their drainage. They are called "lakes," because they naturally form in the lowest parts of the basins. In reality they are, with one exception, solid during all seasons of the year, and are only covered with shallow waters during the spring and early summer months.

There can be no question but that these deposits all arise through the evaporation of the waters of mineral springs which feed into the lakes and have no way of escaping.

The various deposits may be classified as follows:

	Name of deposit.	Locality.	Estimated area.
	<i>I.—Sulphate of sodium (Glauber's salt).</i>		<i>Acres.</i>
A	Union Pacific lakes	Albany County	60
B	Downey lakes	do	100
C	Bothwell lakes	Carbon County	100
D	Gill lakes	do	80
	<i>II.—Sulphate and carbonate of sodium.</i>		
A	Morgan lake	Carbon County	160
B	New York and Philadelphia lakes	do	150
C	Omaha lake	do	8
D	Wilmington lake	do	160
E	Wilkes Barre lake	do	50
	<i>III.—Pure magnesium sulphate (Epsom salt) and mixture of sodium and magnesium sulphates.</i>		
A	Brooklyn lake	Carbon County	100
B	Philadelphia lake	do	40
C	Chicago lake	do	20

The estimated areas apply to the actual deposits and not to the claims. The latter are rectangular in shape and necessarily include much land not underlaid by the salts. The thickness of the deposits is variable. Along the edge it is of course very thin. Towards the center the thickness is generally unknown, but by borings or pits it is shown to be over 8, 10, even 20 feet, without the bottom being reached. Consequently no legitimate estimate can be made of the amount these deposits are capable of producing. The total area of the first two classes, excluding the Wilmington, which has no solid deposit, is 708 acres. This would yield over 30,000,000 cubic feet of sodium sulphate for each foot in thickness.

I.—Sodium sulphate (Glauber's salt).

A.—*The Union Pacific lakes.*—The following is an extract from a letter written by Mr. Stone, formerly chemist at the Laramie Chemical Works, who was thoroughly familiar with the developments made at these deposits several years ago:

"Replying to your letter of the 5th instant, concerning the Union Pacific soda lakes, I would say that the lakes are situated southwest of Laramie about 13 miles. They are four in number, varying in size from 4 to 40 acres, and usually (always, until within three years) are dry after the middle of August. The water which floods them in the spring comes principally from the melting snow in the small basin which drains into the lakes. They are, however, fed by numerous springs, all of which, with two exceptions, send forth a strong solution of sulphate of sodium. This solution, evaporating under the influence of our dry, windy summer, deposits the salt

* Rock salt is not known to occur in Wyoming. There are numerous salt springs, notably in Crook County, on Salt Creek, and in Uintah County, on Salt River. These springs will not be described under this heading.

which it holds in clear crystals, having the composition indicated in the formula $\text{Na}_2\text{SO}_4, 10\text{H}_2\text{O}$.

"Various soundings have been made into the deposits and measurements obtained, showing that the soda-beds are in some places 40 feet deep. * * *

"In speaking of the springs mention was made of two exceptions to the soda springs. These two are very remarkable, inasmuch as they flow within a few feet of the soda and are of pure sweet water.

"The soil surrounding the lakes, as shown by excavations made at various points near the lakes, is made up in the 15 feet next to the surface, of first, a thin stratum of fine sandy gravel; second, a stratum of hard clay, which occasionally assumes a shaly appearance. This clay varies (to) from 10 to 12 feet in thickness. Below the clay is found a coarse gravel."

The composition of the soda deposits found in these lakes is remarkably uniform, the average composition being shown by the following results, made in our laboratory:

Sodium sulphate.....	44.5
Water.....	54.9
Insoluble matter.....	.5
	99.9

The remaining 1 per cent. is made of a mixture of calcium and magnesium salts. The insoluble matter is principally organic, but usually contains silica and alumina, which have been blown upon the lakes. The water also varies in amount, but is seldom found less than 44 per cent.

A black mud is found in the soda-beds, in layers of from one-half inch to 6 inches in thickness. The composition of this mud we have never determined.

The following analyses from these deposits are taken from the Mineral Resources of the United States:

	1	2	3
Sulphate of soda	44.55	41.41	39.78
Water.....	54.98	54.79	59.66
Insoluble matter.....	.47	3.80	.56

From the same page the following analysis is obtained. It is probably of a sample of the "black mud" referred to by Mr. Stone:

Iron, lime, magnesia	22.33
Alumina, soda, hydrochloric and sulphuric acids	40.82
Silica.....	36.85
Organic matter	Trace.

B.—*The Downey lakes*.—These lakes are three in number. They are located on sections 15, 22, and 21, township 13 N., range 75 W. They are between 8 and 9 miles nearly due south of the Union Pacific lakes, and are separated from the latter by the Big Laramie River. On the west there is a stream called Sandy Creek, not more than one-quarter of a mile distant. The divide between this creek and the lakes is very low—probably not over 10 feet. The area of the claims, including the lakes, aggregate 320 acres, of which over 100 acres are occupied by the soda deposits.

These deposits cover an area of over 100 acres, and contain towards the center from 7 to 9 feet of solid sodium sulphate. Analyses and practical tests at the Laramie Glass Works show the soda to be equally pure with that from the Union Pacific lakes.

C.—*The Bothwell lakes*.—These deposits are near the old telegraph road leading northwest from Rawlins, and about 28 miles from that town. The soda is solid and hard and pure, except for mechanically included sand. I understand that the deposits are very thick.

D.—*The Gill lakes*.—This group of lakes is situated in section 26, township 35 N., range 78 W., and is 6 miles north of the Platte River at the old Fiddleback Ranch. I have passed by the latter point twice, but did not then know of the existence of the lakes. They are four in number, and are all located in one claim of 160 acres. Of this area between 80 and 90 acres are covered by the lakes. A number of pits have been sunk to a depth of 12 feet on these lakes, and from one of this depth a hole was bored four feet deeper. The soda has never been pierced. A sample of this soda given me shows it to be very clear and pure. When freshly broken it is clear,

almost transparent. The outside rapidly loses water when exposed to the air. An analysis of this soda gave the following results:

Sodium sulphate.....	94.50
Magnesium sulphate.....	2.52
Sodium chloride.....	0.54
Water.....	1.61
Undetermined and loss.....	.83
	<hr/> 100.00

This sample had necessarily been freely exposed to the air for a long time. The Gill lakes are not only important from the fact that they have very large deposits of sulphate of soda, but also because they are now within 7 miles of the railroad grade, which passes up the Platte.

II.—Deposits of sulphate and carbonate of sodium.

A.—The Morgan lake.—The Morgan lake lies in township 28 N., range 88 W., near the northern boundary, and a few miles south of the Sweetwater River.

The pits sunk on the lake, which is dry after August, have never been deeper than 12 feet. In such pits the bottom of the soda has never been struck. Even at a distance of 75 feet from the shore the solid and pure soda is over 12 feet deep. The soda when first taken out is clear and transparent, but like all the other sodas quickly effloresces. It consists of a mixture of carbonate and sulphate of soda in varying proportions, and contains little else than these salts. The samples taken from a depth of 12 feet show more sulphate than samples taken near the surface. The soda of this lake is certainly very great in quantity. Taking the area of the deposit at only 100 acres, and the thickness at but 12 feet, the contents of the deposit would be over 50,000,000 cubic feet.

The remaining deposits of this class are all situated in the Sweetwater Valley near Independence Rock. They are known as the Dupont lakes.

The Wilmington and Wilkes Barre have no solid deposits. The soda is entirely in solution. The following analyses will show the composition of these salts:*

Sample from surface of Omaha claim.

Moisture.....	9.01
Insoluble matter.....	2.61
Sulphate of soda.....	25.75
Chloride of sodium.....	2.13
Carbonate of soda.....	30.62
Bicarbonate of soda.....	30.09
Total.....	<hr/> 100.21

Dried sample from Wilkes Barre claim.

Chloride of sodium.....	1.83
Sulphate of soda.....	39.04
Carbonate of soda.....	59.00
Insoluble matter.....	9.23

Dried samples from New York and Philadelphia claims.

Chloride of sodium.....	1.83	2.04	2.52
Sulphate of soda.....	71.37	44.74	72.40
Carbonate of soda.....	3.10	5.00	5.00
Insoluble matter.....	22.82	47.50	19.03

III.—Magnesium sulphate (epsom salts) and mixtures of magnesium and sodium sulphates.

All of these deposits occur in an inclosed basin 3 miles north of Wilcox, in Carbon County. The lakes, some twenty-six in number, are scattered over the bottom of the basin, and are all contained within a space of not over 2 square miles. In size they vary from not over a fraction of an acre to nearly or quite 100 acres. Many of the

*All of the five analyses here given are taken from the Mineral Resources of the United States, calendar year 1885; chapter on glass materials, by Joseph D. Weeks.

twenty-six lakes are of no importance, either on account of their small size or because they have no deposits in them. Only a few of the more important ones will be described.

A.—The Brooklyn has an area of about 100 acres. It contains a deposit about 7 inches thick of nearly chemically normal magnesium sulphate. The analysis given below shows its composition :

Insoluble residue.....	0.11
Water	49.75
Sulphur trioxide.....	33.08
Magnesia	16.26
Sodium chloride.....	0.21
Sodium oxide	0.43

There are over 2,000,000 cubic feet of the pure salt in this deposit, as well as a large amount in the black mud lying beneath it, that is peculiar to soluble salt deposits.

B.—The Philadelphia lake lies within a few hundred yards of the Brooklyn, and is separated from it by a low flat. It contains both salts, as an analysis given below will show. The deposit away from the shore is 4 to 7 feet thick :

Insoluble residue.....	3.38
Water	48.90
Sulphur trioxide.....	31.33
Magnesia	15.62
Sodium chloride.....	0.44
Sodium oxide	0.07

C.—The Chicago lakes form a group of which the largest is about 10 acres. The maximum thickness developed in any of them is 6 feet. Two analyses show the following composition :

	No. 1.	No. 2.
Insoluble residue.....	0.16	Trace.
Water.....	32.43	33.50
Sulphur trioxide	41.19	40.12
Magnesia.....	11.06	11.90
Sodium oxide.....	14.78	12.40

The deposits of the sulphates and of the mixture of the sulphate and carbonate of sodium in Wyoming are of great interest and importance on account of the immense amounts in which they occur, their purity, and the fact that there is a large market for such material when facilities for placing it upon the market, namely, cheap transportation and the manufactories for using the soda at home and making products that will permit transportation to a large market, are available. Already there are important beginnings in the latter direction.

The Wyoming natural sulphate of sodium has only to be dried and it is a superior grade of the salt cake of commerce elsewhere obtained as a product of manufacture from common salt. From the salt cake, soda ash, caustic soda, and various other sodium salts are manufactured. The mixture of the sulphate and the carbonate when dried will answer all the purposes of salt cake and will be somewhat cheaper raw material for chemical works.

The average price paid for salt cake in 1885 at the glass-works throughout the United States was \$16.95 per long ton,* and since it is imported, for the most part, the glass-works of Illinois and in the West generally must have paid more than this by several dollars, probably over \$20 per ton. When it is remembered that the Rock Springs coal is mined, the freight paid to Omaha, sold and retailed at \$6.50 per ton, and that profits are made presumedly upon all these transactions, it certainly seems probable that a profit could be made by the railroads by shipping the salt cake of Laramie City to the Mississippi, a distance not much greater, and allowing it to be sold at prices which would yield a fair profit to the owners and yet compete with the eastern market. Whether the railroad can do this or not will soon be seen, for Wyoming will have in the near future three separate roads well extended within her limits.

The total amount of sodium salts used in this country in 1885 cost \$10,000,000. When the various deposits are reached by the railroads it seems probable that they will be able to help to supply this large market.

The only point in Wyoming where the deposits are utilized is at Laramie City, where there are chemical works for furnishing manufactured products, glass-works, and a soap manufactory. It seems to the writer that it can only be a question of a short time when these and similar enterprises will prove successful.

* Mineral Resources of the United States, calendar year 1885.

WYOMING IRON ORES.

The Platte Cañon hematite deposits.—The analyses given for the ores of this district were all made in the office of Mr. H. B. Hodges, engineer of tests for the Union Pacific railroad. The two samples from the bottom level of the Sunrise mine were taken by the writer in the fall of 1888.

The important bodies of iron ore developed in this district occur in Eureka Gulch and Whalen Cañon. Three classes of deposits may be recognized. (1.) Lenticular masses of ore in the crystalline schists. (2.) Stratified deposits of hematite lying upon the slates, that have resulted from erosion of outcropping masses of ore in early geological time. (3.) Recent superficial mixtures of detritus, consisting of pebbles and fragments of hematite, slate, limestone, etc., forming with finer material the soil about the croppings of the first two classes of deposit.

The hills about these gulches are capped with nearly horizontal strata of the oldest stratified rocks, and it is only in the gulches that the crystalline schists and the contact between them and the "cap rocks" is laid bare. Consequently only a portion of the area liable to contain deposits is uncovered.

The Sunrise mine has been worked for copper, which was found in irregular deposits entirely surrounded by very pure hematite. In prospecting solely for copper ore the hematite has been partially developed.

At the west end of the claim there is much float in pieces of from a few pounds to a few tons' weight. An average sample of this ore gave :

Silica.....	2.40
Ferric oxide.....	94.42
Phosphorus.....	.07
Sulphur.....	none
Titannic acid.....	none
Copper.....	none
Metallic iron (computed).....	66.09

At the main shaft several hundred feet distant much iron ore has been mined and thrown upon a dump. A sample of this ore gave :

Silica.....	1.90
Ferric oxide.....	96.50
Phosphorus.....	trace
Sulphur.....	none
Titannic acid.....	none
Copper.....	none
Metallic iron (computed).....	67.55

The bottom level of the shaft, which is 110 feet beneath the surface, cross-cuts the ore body and shows it to be 60 feet thick on this section. The ore is of two kinds, hard and soft. No. 1 represents an average sample of the hard ore ; No. 2 an average of the soft :

	1.	2.
Water of constitution.....	0.47	0.25
Silica.....		13.03
Ferric oxide.....	88.45	83.65
Phosphorus.....	0.02	Trace.
Sulphur.....	None.	Trace.
Titannic acid.....	None.	Trace.
Copper.....	None.	
Metallic iron (computed).....	61.92	58.56

Further to the northeast the Village Belle, Lone Jack, and other claims show some good iron ore. But there has not been sufficient systematic development to show what ore bodies they have or whether the main ore body of the Sunrise extends into this ground without a break or not. It is only shown that they have some good ore in the slates.

South of the Sunrise and across Eureka Gulch a number of short tunnels have been run in on the contact between the slate and the overlying quartzite. Most of these tunnels show much iron ore. Some of it poor in quality, none as good as Sunrise ore. Thus far they have developed no ore bodies in place between slate walls.

The Chicago mining claim is situated in Whalen Cañon ; it was discovered a little more than a year ago. The only developments are a short tunnel and a crooked drift connecting it with a shaft. The tunnel is not more than 20 feet in length ; it passes through a loose mass of hematite and into a solid body of the same ore ; top, bottom,

and sides show iron ore; there can be no doubt but that the ore body is large. The only question, which future exploitation alone can decide, is how large it is. The following are analyses of two samples of this ore. No. 1 is an average of the hard ore from the face; No. 2 of soft ore from the dump:

	1.	2.
Water of constitution	0.35	0.33
Silica	9.12	11.86
Calcic oxide		1.17
Ferric oxide	89.08	83.93
Phosphorus	Trace.	Trace.
Sulphur	None.	None.
Copper	None.	None.
Titanic acid	None.	None.
Metallic iron (computed)	62.35	58.75

There are many other points that might be mentioned where there is good float ore and prospect tunnels showing ore. But the deposits already described are the most important yet developed.

From the nature of the stratified deposits alluded to, there is every prospect that other large deposits of hematite, like that of the Sunrise mine, exist in the slates, and that by following the stratified deposits these bodies will be reached.

From the fact that a large portion of the area between the Sunrise and the Chicago claims, which seem to be upon the same belt, is covered by several hundred feet of "cap rock," it is possible that large deposits may yet be found in this district by following pay streaks of ore.

With but little work, and that mostly done in a search for copper ore, it has been shown that, with a little preparation, the district is capable of furnishing a large quantity of ore of very excellent quality, and that it is possible, but not proven, that it will become celebrated as a producer, along with the other great hematite deposits of the United States.

The Rawlins Hematite.—No new developments have been made in this locality for a number of years. It is said by the owners of the mines worked, that in all over 100,000 tons of ore were mined from their claims. Of this a part was used in the manufacture of paint; by far the larger portion was sent to Utah as a flux in silver-lead smelting.

This ore, according to Clarence King, was almost chemically pure. It occurred in irregular lenses between quartzite and limestone, and varied between a few inches and 20 feet or more in thickness. It is said that there is still a good face of ore left in one of the openings.

At a number of other places along the base of Rawlins Mountain the soil covering the strata which contains this deposit is of deep red color, and it is probable that similar deposits would be discovered should a demand for the ore arise. Thus far there is no indication of phenomenally large bodies occurring in this district.

The Hematite of Bradley's Peak.—Bradley's Peak is the culminating point of the Seminoe Mountains. The crest of the peak consists of eruptive rocks, the southern base of metamorphic rocks carrying hematite. Lifted by a great fault into direct conjunctions with the metamorphics is the Laramie or coal bearing group of rocks which lie about the base of the peak.

Upon the first visit to this locality the writer was much disappointed in what he saw compared with what he had heard of the ore bodies. It happened, however, that he did not see at that time the largest and purest deposits, and although he still does not believe that they are the largest in the world, as has been claimed for them, yet he does believe that large and valuable bodies of ore may be developed.

The south base of Bradley's Peak is composed of chloritic schists and ferruginous quartzite cut by dikes of eruptive rocks in many places. The hematite occurs in lenticular bodies in the slates and quartzites. Towards the southeast the streaks are small and as a rule contain much silica, as the following partial analysis, made by Mr. Henry E. Wood, of Denver, will show:

	1.	2.
Metallic iron	55.30	29.5
Oxygen	23.91	25.50
Silica	20.10	15.00

Further to the west and across a long ridge running down the mountains there are other much larger deposits of ore. How large, the shafts and tunnels upon the ore do not show, for they do not show the walls of the deposits.

Mr. A. H. Cronkite furnished me with the following analysis of ore from this locality, also made by Mr. Wood:

Metallic iron.....	63.56
Oxygen.....	27.25
Silica.....	2.68
Titannic acid.....	.03
Phosphorus.....	none.
Manganese.....	none.

Mr. Boney Earnest recently sent me a fine piece of iron ore weighing about 150 pounds. He tells me that this ore occurs in a body 60 feet in thickness. The locality beyond that of central Carbon County is not given. No analysis has yet been made of this ore. I would judge that the piece sent me would yield fully 60 per cent. of metallic iron.

Magnetic iron ore has been found as float in large pieces in Crook County. The ore in place has not been found—has not actually been searched for. The quality of this ore has not yet been determined. Clay iron ore is abundant in many places in the shales of the Colorado group. It is so common that it attracts but little attention and little of it has been developed. There can be no doubt but that large quantities of it could be furnished should a demand for it arise.

OTHER MINERAL RESOURCES OF WYOMING.

1. *Resources of the Black Hills, Crook County.*

The Black Hills, lying for the most part in Dakota, are yet partly in Crook County, Wyo. In general type its geology is very simple, being merely an elliptical uplift, accompanied by the usual mountain sculpture, which has removed all the stratified rocks from the center and exposed the granites and schists, while the stratified rocks occur around this nucleus, in the order of their age and superposition, in belts or rings of irregular width.

In other words, the center of the hills consists essentially of granites and other crystalline rocks; and, proceeding outward toward the plains in any direction, definite belts of quartzite, limestone, red beds, sandstone, shale, and finally shales and sandstones are successively encountered, and, as they dip more steeply than the slope of the hills, each belt disappears beneath the surface and the next succeeding rock formation.

In addition to this very simple structure there is, however, another complicating feature, namely, the occurrence of numerous dikes and intrusions of eruptive rocks which cut the slates and granites in all directions and burst through the stratified rocks as high up as the top of the red beds. These eruptives in the crystalline slates of Wyoming occur only as dikes which outcrop, but do not form any prominent hills above the level of the surrounding country. But where they have burst up through the stratified rocks they form hills, even mountains.

In Wyoming Sundance Mountain, Inyan Kara, the Devil's Tower, Black Buttes, Missouri Buttes, and the Bear Lodge Mountains are all formed by such projecting masses of eruptive rock. These alone form a separate series of prominences and break the otherwise simple structure of the Black Hills uplift proper.

I have dwelt so much upon the structure of the hills because all of the various belts of rock show marked peculiarities and with one exception may be recognized by the most careless observer. Moreover, as they differ in appearance they differ in the character of the actual and possible mineral deposits that they are liable to contain. Taking the belts in succession, the following mineral products have been found in them in quantities sufficient to attract attention:

	Class of rock.	Mineral substances found.
1	Crystalline nucleus.....	Gold, tin ore, iron ore.
2	{Quartzite } {Limestone}.....	Lead, silver, gold.
3	Red beds.....	Salt springs, building stone, gypsum, limestone, fire-clay coal.
4	Dakota sandstone.....	Coal, lignite, fire-clay, petroleum.
5	Colorado and Fox Hill shales and sandstone.	Petroleum, clay, impure coal, clay iron ore.
6	Laramie sandstones.....	Lignite.

The crystalline nucleus.—There is a small and apparently detached area of schists lying a little north of west of Sundance, probably in townships 51 and 52, ranges 59 and 60. Consequently the boundary line between Wyoming and South Dakota cuts through it and divides it into two portions, of which the smaller lies in Wyoming. In all it probably has an area of about 60 square miles.

These rocks are cut by a number of deep gulches, of which Beaver Creek, Potatoe and Bear Gulches (in Dakota), Sand Creek, Mallory and Spotted Tail Gulches (in Wyoming) are the most important. The most prominent mountain, Nigger Hill, lies between Bear Gulch and Sand Creek.

The rocks may be divided into two classes, schists and eruptives, the latter occurring as dikes in the former. The schists are both micaceous and chloritic. They are thoroughly crystalline though fine grained. Their foliation is distinct and perfect. They have an average trend of magnetic north and south, and dip to the west, usually at angles between 45° and 60° . In places they contain segregated bands of quartz of considerable size. These quartz bodies lie parallel to the foliation of the schists, are very pure, white, compact, and glassy, and, as far as known, do not carry appreciable quantities of gold.

The eruptive rocks are of two classes: (1) Trachytes and diorites (?), which are not known to carry any mineral of commercial importance. (2) Peculiar dikes of coarse-grained granitic rock which carry some tin ore.

The vein tin deposits.—The granitic dikes are very abundant, and several hundred mining claims have been located upon them. They almost always lie parallel to the bedding planes of the schists, but one instance to the contrary being noted. They vary in thickness from 2 to 50 feet, and considerable variation is sometimes evident in one and the same dike.

The vein rock consists of quartz, feldspar, and mica, and is usually very coarse-grained, plates of mica several inches long being not uncommon. An accessory constituents it contains cassiterite, tourmaline, garnet, and other minerals whose exact nature have never been determined. The cassiterite occurs in imperfect crystals (rare), granules, and grains scattered through all three of the chief constituents of the matrix. Pieces as large as a hazel-nut are not uncommon, but usually it is finer, much of it being scarcely visible to the naked eye, and much of it only to be seen with the aid of a lens.

These deposits are the first of the kind the writer has ever seen, and he scarcely considers himself able to give a competent and exhaustive report upon them. Moreover, he has not yet made any tests to determine the amount of tin the vein rock may be expected to carry. It is claimed that the deposits have been examined by competent and experienced men and that samples carefully taken yielded from 2 to 6 per cent. metallic tin; that even those taken which showed no visible cassiterite yielded from 2 to 4 per cent. of metallic tin. If this is the case and the position of the deposits for working the enormous quantity of ore, and the sufficient water supply is considered it seems probable that in the future mines will be opened up and works erected for extraction of the ores and separation of the cassiterite from the gangue.

The stream tin deposits.—Stream tin has been found in all of the gulches that cut the granitic dikes. In 1885 it was recognized by an Australian miner; before that time it was regarded as "black sand" (magnetite). Some large pieces, weighing several pounds, have been found, but most of it is in grains of small size. Some of the gulch miners have saved a part of the stream tin that has been caught with the gold in the sluice-boxes and in this way have saved a number of tons of it; and it is possible that there is sufficient to pay for working the gulch gravels if approved methods of washing were adopted. This could be easily proved by careful tests across the gulches at different points. The stream tin is pure, and when carefully washed will yield 65 to 70 per cent. of metallic tin by a common process of reduction.

Placer gold.—This district was celebrated for its rich placers and coarse gold at the time of the Black Hills excitement. All of these placers are now practically exhausted, and only a few men are still at work gleaming pay from old ground. The annual yield of both the Wyoming and Dakota gulches now amounts only to a few thousand dollars.

Vein gold.—Hitherto all efforts to discover the source of the placer gold have been fruitless. Not only have no pay mines been discovered, but gold has not been found in ever so small a quantity, in deposits that might prove a common source for all the placers. On Mineral Hill in Wyoming there has been some developments made upon leads which have yielded rich assays, but thus far there are no pay mines. As far as I know no attention has been paid to certain pyritiferous eruptive rocks whose occurrence is broad-spread over the district. These might possibly prove to be the source of the placer gold, as was largely, if not altogether, the case in California Gulch, near Leadville.

The quartzite and limestone.—Carbonate Hill lies to the west of the Black Buttes and immediately behind them. It consists of the older stratified rocks cut through

by several kinds of eruptives. Upon the west side of the hill certain siliceous limestones dip gently to the southeast until they are abruptly broken by a dike of yellow rock, probably a porphyry. Upon the line of contact between the limestone and porphyry a shaft has been sunk and a tunnel run which has produced some galena associated with a flint matrix. This is upon the Steel Galena claim. An adjoining claim, called the Gray Carbonate, has a small body of excellent carbonate of lead ore lying in the limestone just east of the porphyry. About \$5,000 has been expended upon this claim very foolishly and with no idea of methodical development, with the result that little more can be seen of the nature of the deposit than was evident before work was commenced. About 40 to 50 tons of high-grade lead ore have been gouged out and objectless shafts and tunnels made, but it has not been shown whether there is merely an isolated lens of ore or a deposit worthy of a small mine. In my opinion the work upon this claim should be confined to prospecting the contact between the limestone and the porphyry.

The carbonate ore will yield from 30 to 60 per cent. of lead, and is said to assay from 10 to 30 ounces in silver. It would prove a very desirable smelting ore.

I have seen no other prospects for silver and lead in the Wyoming Black Hills that are worthy of the name. There is, however, quite a large area in which the quartzites and limestones are in conjunction with eruptive rocks, and I regard such contacts as favorable for the existence of ore deposits.

The red beds.—I have only space to mention the salt springs and fire-clay deposits of the Jura-Triassic formations.

Some years ago salt springs were located and evaporating-pans built on Salt Creek, about 30 miles south of Sundance. The salt made was sold at the springs at \$40 per ton and shipped into Deadwood. There are many springs rising over an acre or more of ground. The brine is said to contain about 20 per cent. of salt, and estimates (not my own) place the capacity of the spring at 60 tons per day. The springs come to the surface near the top of the Triassic rocks.

Near the top of the Jurassic there is a series of clays and marls that average about 100 feet in thickness. They are very persistent and regular in their occurrence. Usually they may be easily recognized by a purple band 30 feet or more in thickness near the center. Mr. Hemingway, the superintendent of the Mount Zion coal mines, informs me that certain of these clay strata make an excellent fire-brick.

This horizon of the Jurassic is also known to contain impure and thin seams of coal. As far as I have seen them they are so impure as to be worthless. Recent rumors have reached me that good coal has been found in this horizon on Hay Creek. I wait for the report to be confirmed.

The coals and petroleum of Crook County, occurring in the Dakota and Colorado groups of the Cretaceous formation, are described elsewhere under the appropriate general headings.

2. Resources in other portions of Wyoming.

Gold and silver.—Little has been done in precious-metal mining during the past year. Besides the gulch mining in Crook County, Mr. Emile Granier has continued his improvements in preparation for extensive hydraulic mining near Atlantic City. He is now constructing a reservoir dam at Christina Lake.

The Keystone mine, on Douglas Creek, Albany County, has recently been sold, and the new owners are building a mill and developing the mine for production. They expect to obtain an average of \$20 per ton upon the ore mined.

Copper.—A little more than a year ago the Sunrise mine, at Hartville, was leased and opened, and the ore extracted was smelted at Fairbank, on the Platte River. The ore in sight was worked out of the several thousand tons which were mined, and the lease was abandoned.

The copper ore of this mine occurs in irregular masses in hematite. From the nature of the deposit it is impossible to say where another similar body occurs. Drifts run under the ore body do not show a copper stain, nor does the hematite contain even a trace of copper. Were the iron deposits worked it is possible that similar bodies would be found, but in what direction or how far from the old ore body it is impossible to say.

The Sparks and Green Mountain Boy claims both show good ore, the latter containing much silver. Neither of these mines has been actually developed. Many other locations are held in this vicinity. Most of them are prospectively of little value. None of them have any considerable developments. The Michigan mine, of Muskrat Cañon, shows immense quantities of low-grade copper ore with a silicious matrix. It has recently been purchased, and is now being opened up. It is proposed to begin shipments with 20 tons of ore per day and to increase the output as the mine warrants. The ore is hauled in wagons to Lusk and there shipped to Pennsylvania by rail. It is smelted with highly basic ores.

Building stone.—The Rawlins building stone is taken from a quarry about 4 miles

from the railroad. It occurs in immense amounts, that may be easily and cheaply taken out. The stone is of a uniform gray color, is massive, free from a tendency to cleave in any particular direction, is free from ferruginous stains and from concretions of any sort. It is soft when mined, and is an excellent working stone. It hardens on exposure and stands well in a building. It is used in Nebraska and Wyoming. The capitol at Cheyenne is built of this stone.

A new quarry opened near Laramie furnishes brick-red and pink sandstones. I understand that the owners have a contract to deliver two car loads of this stone per week at points in Nebraska, the contract to run for ten years. Other good building stones are obtained from the Carboniferous gray sandstones and drab limestones near Laramie. They furnished the stone for the university and other Laramie buildings. A handsome light-gray or white sandstone is quarried near Cheyenne and used in buildings in that city. It is a fine working stone, and makes a very handsome trimming in large buildings. On Horse Creek both white and red sandstones are found. The stone is handsome and strong. Thus far little of it has been used, owing to the recentness of its discovery.

At Iron Mountain a switch has been laid to an outcrop of massive gray sandstone. The rock is mined in large blocks and used by the railway company for heavy foundations.

A beautiful red sandstone, firm even in grain, color, and texture, and capable of receiving elaborate ornamental cutting, is being quarried near Glen Rock, in Converse County. Contracts have been recently made to deliver this stone in Omaha and Lincoln.

Building stone is also quarried as demand for it arises at many other places in Wyoming. The occurrence of excellent and handsome stone in many undeveloped localities is well known. The great ledge of handsome red sandstone near Lander deserves especial mention.

Marble.—The marble deposits have never been developed. They occur in the Platte Cañon district and at various points in the Laramie and Medicine Bow Mountains. From Fairbank, on the Platte River, to Muskrat Cañon there are outcrops of a great belt of marble at intervals. In many places it is exceedingly silicious and contains bands and conculions of quartz. At some points it is practically free from silica. In composition it is dolomite. Though crystalline, it is very fine grained. In color it is white, pink, grayish-blue, and mottled. In most places it is cut by numerous joints and bedding planes. It occurs in the largest blocks in Muskrat Cañon.

A large outcrop of dolomitic marble occurs on the Laramie River, 12 miles west of Uva. This marble is pure white, white streaked with gray, and gray. I have seen specimens weighing several hundred pounds of snowy whiteness. It is medium to coarse crystalline in texture. It is said to be massive and remarkably free from joints.

Similar marble is said to occur near Lookout Station, in Albany County, and some marble has been taken from it as specimens. The other localities have never been prospected.

Gypsum.—The great abundance of gypsum in the red beds of the West, wherever they occur, is well known. It is found in thick strata, often very pure, at many places. At Laramie it is proposed to mine a large deposit of gypsum and manufacture it into plaster of Paris. A 50-ton plant is now being built for this purpose.

Limestone and Sand.

The occurrence of very pure varieties of these rocks is common. Besides the use of limestone for mortar at various points it has no demand except at Laramie, where it is used for building purposes and glass-making. The limestone used for the latter purpose is obtained 3 miles east of the town. The following analysis of a sample of it was furnished by the glass company:

Calcium carbonate.....	98.83
Magnesium carbonate.....	0.45
Iron carbonate.....	0.12
Iron bisulphide.....	0.02
Alumina.....	0.10
Silica.....	0.43
Moisture.....	0.05
	<hr/>
	100.00

I have no analysis of the glass-sand which is taken from the same locality. Practical tests show that it will make exceptionally white window-glass.

The limestone and sand are hauled in wagons a little over 3 miles to the glass-

works. The soda is hauled 15 miles by rail. The soda as it is mined is dried and mixed in the proper proportions with the crushed limestone and unwashed sand.

Asbestos.—This mineral is found in the Laramie, Seminoe, and Medicine Bow Mountains, and elsewhere. I have received merchantable samples. The amount of the mineral that might be produced is not known.

Clays.—Little is known of the Wyoming clays as yet. Ordinary brick-clays are everywhere abundant. Other and more valuable clays also occur in quantity. Clay from Rock Creek is now being shipped to the East, and fire-brick are being made from the Mount Zion fire-clays. Both of these varieties have a wide-spread occurrence.

Mica, plumbago, sulphur, and other minerals are known to occur in quantities. They either have not been sufficiently developed or the writer has not examined them, and no description of them can now be given.

MILITARY POSTS IN WYOMING.

There are in the Territory the following forts, depots, and encampments where United States troops are stationed:

Fort D. A. Russell, near Cheyenne, full regimental post.

Cheyenne Depot, near Cheyenne, the quartermaster's department.

Fort Laramie, on the Laramie and North Platte Rivers, 95 miles north of Cheyenne, a large, complete fort, and the headquarters of a regiment, recently ordered abandoned.

Fort McKinney, on Clear Creek, at the base of the Big Horn Mountains, near the center of Johnson County and 2 miles from Buffalo, its county seat. This is a large post with regimental headquarters.

Fort Washakie is on Wind River, near the center of Fremont County, a short distance from Lander, the county seat, and has three or more companies.

Fort Bridger is on Black's Fork of Green River, some 10 miles south of Carter Station, on the Union Pacific Railway, in Uinta County, and usually has about five companies.

At Rock Springs, near the coal mines, there is a post with two companies.

At Mammoth Hot Springs, in Yellowstone National Park, two companies of cavalry are stationed.

Forts Sanders and Fetterman have been abandoned as military posts.

POST-OFFICES IN THE TERRITORY OF WYOMING.

[Corrected from the books of the Post-Office Department, July 1, 1889. Offices in *italics* are money-order offices. Those marked with the asterisk (*) are international as well as domestic money-order offices.]

Town.	County.	Town.	County.
Almond	Sweetwater.	Bitter Creek	Sweetwater.
Almy	Uinta.	Bonanza	Johnson.
Afton	Do.	Bordeaux	Laramie.
Archer	Laramie.	Box Elder	Converse.
Arland	Fremont.	Bryan	Sweetwater.
Ariosa	Laramie.	Buford	Laramie.
Aspen	Uinta.	Buffalo	Johnson.
<i>Atlantic City</i>	Fremont.	Burlington	Crook.
Bagg's	Carbon.	Burnt Fork	Sweetwater.
Banner	Sheridan.	<i>Carbon</i>	Carbon.
Beaver	Converse.	Carlile	Crook.
Beckton	Sheridan.	Carter	Uinta.
Bennett	Carbon.	Casper	Carbon.
Bessemer	Do.	Centennial	Albany.
Beulah	Crook.	<i>Cheyenne*</i>	Laramie.
Big Horn	Sheridan.	Chug Water	Do.
Big Piney	Uinta.	Claro	Converse.
Big Red	Sheridan.	Cokeville	Uinta.
Bingham	Do.	Collins	Carbon.

Post-offices in the Territory of Wyoming—Continued.

Town.	County.	Town.	County.
Cooper.....	Albany.	Lovell.....	Fremont.
Corbett.....	Fremont.	Lusk.....	Converse.
Cummins.....	Albany.	Lyons.....	Fremont.
Converse.....	Laramie.	Mammoth Hot Springs.....	National Park Reservation.
Dallas.....	Fremont.		
Davis Ranch.....	Laramie.	Manville.....	Converse.
Dayton.....	Johnson.	Medicine Bow.....	Carbon.
Deer Creek.....	Albany.	Meeteetse.....	Fremont.
Derby.....	Fremont.	Mikado.....	Crook.
Dexterville.....	Carbon.	Millersburgh.....	Laramie.
Dixon.....	Do.	Miners Delight.....	Fremont.
Douglas.....	Converse.	Moran.....	Laramie.
Dry Piney.....	Uinta.	Myersville.....	Fremont.
Durbin.....	Carbon.	New Fork.....	Do.
Egbert.....	Laramie.	Ohlman.....	Sheridan.
Elk Mountain.....	Carbon.	Oil City.....	Carbon.
Embar.....	Fremont.	Ono.....	Johnson.
Eothen.....	Crook.	Otto.....	Fremont.
Ervay.....	Carbon.	Opal.....	Uinta.
Evanston.....	Uinta.	Own.....	Albany.
Fairbank.....	Laramie.	Pass.....	Sheridan.
Ferris.....	Carbon.	Patrick.....	Laramie.
Fontenelle.....	Uinta.	Percy.....	Carbon.
Forks.....	Crook.	Phillips.....	Laramie.
Fort Bridger.....	Uinta.	Piedmont.....	Uinta.
Fort Fetterman.....	Converse.	Pine Bluff.....	Laramie.
Fort Fred Steele.....	Carbon.	Powder River.....	Johnson.
Fort Laramie.....	Laramie.	Raw Hide Butte.....	Laramie.
Fort McKinney.....	Johnson.	Rawlins*.....	Carbon.
Fort Russell.....	Laramie.	Red Bank.....	Johnson.
Fort Washakie.....	Fremont.	Red Cañon.....	Uinta.
Fossil.....	Uinta.	River Side.....	Johnson.
Freeland.....	Carbon.	Rock Creek.....	Albany.
Glenrock.....	Converse.	Rockdale.....	Carbon.
Goshen.....	Laramie.	Rock Springs*.....	Sweetwater.
Granger.....	Uinta.	Rongis.....	Fremont.
Granite Cañon.....	Laramie.	Saint Stephen's.....	Do.
Green.....	Carbon.	Salem.....	Laramie.
Green River.....	Sweetwater.	Saratoga.....	Carbon.
Harley.....	Fremont.	Seminole.....	Do.
Ham's Fork.....	Uinta.	Shawnee.....	Converse.
Hartville.....	Laramie.	Shell.....	Johnson.
Hat Creek.....	Converse.	Sheridan.....	Sheridan.
Hatton.....	Albany.	Sherman.....	Albany.
Hay Creek.....	Crook.	Shoshone Agency.....	Fremont.
Hilliard.....	Uinta.	Sibille.....	Albany.
Hillsdale.....	Laramie.	Sillem.....	Uinta.
Hubert.....	Do.	Silver Crown.....	Laramie.
Hulet.....	Crook.	Slater.....	Carbon.
Hyatville.....	Johnson.	South Bend.....	Laramie.
Inez.....	Converse.	South Pass City.....	Fremont.
Inyan Kara.....	Crook.	Springs Creek.....	Johnson.
Iron Mountain.....	Laramie.	Spring Hill.....	Albany.
Islay.....	Do.	Sulphur.....	Carbon.
Kearney.....	Johnson.	Sundance.....	Crook.
La Belle.....	Crook.	Swan.....	Carbon.
Labonte.....	Converse.	Sweetwater.....	Do.
Lamar.....	Carbon.	Theresa.....	Converse.
Lander.....	Fremont.	Tie Siding.....	Albany.
Laramie City*.....	Albany.	Tolland.....	Converse.
Leah.....	Do.	Torrey.....	Fremont.
Leo.....	Carbon.	Trabing.....	Johnson.
Linde.....	Crook.	Uva.....	Laramie.
Little Bear.....	Laramie.	Voorhees.....	Converse.
Little Horse Creek.....	Do.	Wendover.....	Laramie.
Little Powder.....	Crook.	Wood's*.....	Albany.
Logan.....	Johnson.	Wheatland.....	Laramie.
Lone Tree.....	Uinta.	Wright's Ranch.....	Uinta.
Lookout.....	Albany.	Wringer.....	Crook.
Lost Cabin.....	Fremont.	Wyoming.....	Albany.

STAGE LINES.

The following is a list of the stage lines in operation in Wyoming:

From—	To—	From—	To—
Bordeaux	Lusk.	Buffalo	Spring Creek.
Wendover	Douglas.	Etchita	Buffalo.
Douglas	Buffalo.	Rock Creek	Fetterman.
Buffalo	Sundance.	Rock Creek	Buffalo and Sheri-
Rawlins	Lander.	Custer*	dan.
Rawlins	Saratoga.	Miles City*	South into Wyo-
Fort Steele	Saratoga.	Billings*	ning.
Rawlins	White River.		South into Wyo-
Lusk	Hat Creek.		ning.
Casper	Rongis.		Lander, Wyo.

* On Northern Pacific Railroad in Montana.

ASSESSED VALUATION.

The following tables give the assessed value of each county since 1870:

It will be noticed that there is a falling off in the assesment of several counties during recent years. This, in most cases, was on account of the formation of new counties, causing a division of the property, and in several cases the depreciation of live-stock. Uinta County is the only county remaining that has not been divided since its organization. Fractions of dollars are omitted.

LARAMIE COUNTY.

Years.	Cattle.		Horses.		Sheep.		Railroad property.	All other property.	Total valuation.
	No.	Value.	No.	Value.	No.	Value.			
1870 ...	941	\$35,070	72	\$6,828	3	\$30	\$606,785	\$1,137,752	\$1,786,465
1871	5,361	147,427	169	8,323	579	1,447	627,355	885,731	1,670,283
1872	8,558	128,370	411	30,825	6	24	734,276	1,301,951	2,195,446
1873	11,375	227,500	677	50,775	2,199	8,796	737,685	1,080,588	2,105,344
1874	28,659	462,453	935	46,685	10,000	15,965	733,810	1,329,604	2,588,517
1875	34,988	453,193	1,471	72,465	22,322	36,581	796,221	1,689,675	3,018,135
1876	45,525	506,238	1,687	62,824	33,564	42,264	657,655	1,819,484	3,088,465
1877	58,101	653,763	1,691	62,700	36,062	49,776	689,295	2,040,252	3,493,786
1878	73,374	805,718	2,500	75,610	41,930	55,644	746,280	2,135,225	3,818,477
1879	97,641	1,062,013	2,888	102,160	56,941	71,467	764,275	1,998,504	3,998,419
1880	113,466	1,379,003	3,530	123,700	79,994	119,491	763,466	1,427,907	3,813,567
1881	141,630	1,659,056	5,359	173,970	66,559	99,365	764,827	1,381,405	4,078,623
1882	190,963	2,427,545	7,245	234,675	85,221	149,145	788,455	1,632,770	5,232,690
1883	244,486	3,637,380	9,546	318,515	90,763	162,620	799,007	2,427,533	7,345,055
1884	283,194	4,261,445	11,946	392,355	57,978	86,995	801,355	2,954,962	8,497,112
1885	277,072	4,141,440	11,904	395,255	36,650	39,650	801,041	3,303,594	8,680,980
1886	233,539	3,930,714	13,502	495,825	41,680	52,210	811,693	3,786,257	9,076,704
1887	227,792	3,041,209	15,974	582,785	35,399	54,193	1,077,464	5,384,285	10,139,936
1888	183,437	2,109,963	15,065	507,020	29,768	45,067	778,140	6,945,447	10,385,637
1889	91,930	1,070,029	14,561	451,025	32,010	49,882	778,141	5,577,794	7,926,871

ALBANY COUNTY.

Years.	Cattle.		Horses.		Sheep.		Railroad property.	All other property.	Total valuation.
	No.	Value.	No.	Value.	No.	Value.			
1870	6,618	\$98,390	244	\$14,800	2,500	\$3,000	\$1,024,024	\$257,557	\$1,397,771
1871	13,545	285,927	958	32,005	11,585	23,329	1,185,464	283,958	1,810,683
1872	12,939	286,059	1,767	64,555	13,046	29,728	1,097,474	470,631	1,898,447
1873	8,558	150,475	1,768	65,210	10,117	22,386	1,100,974	624,664	1,963,709
1874	7,440	125,120	2,075	67,590	11,291	22,427	1,131,332	539,808	1,886,277
1875	9,307	166,668	2,396	70,985	14,787	36,963	1,040,335	966,979	2,281,930
1876	7,457	100,062	1,795	58,300	21,696	42,019	1,045,933	1,018,665	2,264,979
1877	10,328	165,083	2,079	65,539	26,190	49,058	1,050,691	892,028	2,222,390
1878	12,358	160,772	1,965	56,860	26,237	51,227	1,050,995	1,856,247	3,176,101
1879	50,560	502,622	2,284	63,030	43,358	78,106	1,058,915	1,850,041	3,552,714
1880	47,350	544,660	2,181	71,380	59,737	102,870	1,006,635	881,929	2,607,474
1881	58,835	669,199	3,945	95,390	52,019	101,038	1,046,279	999,240	2,911,146
1882	60,935	948,989	3,869	100,495	81,648	162,546	1,171,322	1,184,235	3,567,587
1883	71,264	1,079,345	5,113	143,845	101,485	177,598	1,116,576	1,433,227	3,945,091
1884	102,448	1,549,140	7,325	206,135	115,800	175,625	951,175	1,446,204	4,328,279
1885	91,985	1,409,940	7,714	229,900	83,564	127,804	950,554	1,479,616	4,197,814
1886	91,820	1,515,226	9,108	322,002	90,395	115,060	952,440	1,513,037	4,417,765
1887	75,011	1,081,192	10,217	359,170	70,113	106,045	965,883	2,380,666	4,892,956
1888	36,090	426,788	7,932	244,606	54,239	91,915	920,523	2,344,362	4,028,124
1889	33,149	379,559	8,543	283,185	49,439	80,127	920,524	2,458,799	4,122,104

CARBON COUNTY.

1874	2,017	33,910	220	11,120	8	68	713,915	155,773	914,746
1875	3,266	53,949	456	11,215	5	22	721,352	153,675	946,213
1876	3,331	44,218	468	18,275	5	41	691,923	201,119	955,576
1877	5,000	75,000	500	20,000	15	50	713,319	191,631	1,000,000
1878	20,168	258,633	1,036	26,190	1,682	3,379	739,688	180,404	1,208,294
1879	46,338	507,168	1,763	40,639	1,512	3,024	742,570	231,454	1,506,855
1880	72,055	943,527	2,361	62,672	4,445	11,106	782,825	202,939	2,003,069
1881	66,994	814,086	3,037	80,480	16,045	32,090	784,140	303,203	2,013,999
1882	67,850	1,032,170	3,247	95,390	28,887	71,624	809,592	554,992	2,563,768
1883	92,520	1,973,140	3,325	100,584	58,587	146,467	820,344	622,833	3,663,368
1884	114,869	2,297,380	4,771	135,870	52,065	104,130	821,000	644,574	4,003,054
1885	123,676	2,530,455	6,311	175,400	66,136	117,202	821,814	1,184,829	4,829,700
1886	126,832	2,036,008	7,832	220,740	74,951	96,152	822,864	903,297	4,088,061
1887	98,203	1,352,489	8,425	250,771	101,386	165,629	834,342	1,494,549	4,097,780
1888	90,382	965,783	9,928	271,033	128,985	257,144	844,742	1,443,852	3,782,554
1889	69,086	700,117	10,978	290,033	154,613	270,175	910,638	1,533,065	3,764,028

CONVERSE COUNTY.

1888	90,208	\$956,792	5,955	\$163,281	4,187	\$6,404	\$501,180	\$423,859	\$2,051,516
1889	79,141	880,621	5,547	145,990	3,433	5,230	588,897	525,626	2,146,364

SWEETWATER COUNTY.

1870	584	28,535	102	8,360	487	1,751	1,290,042	512,133	1,840,821
1871	781	26,735	162	12,255	160	500	1,290,042	308,033	1,637,565
1872	1,650	37,495	253	15,280	124	496	1,290,042	254,640	1,597,953
1873	2,872	76,896	378	20,225	120	480	1,306,523	43,276	1,447,400
1874	3,630	93,687	615	22,010	531	1,328	1,225,591	193,783	1,536,399
1875	6,115	108,341	737	28,860	600	1,800	1,478,974	247,281	1,865,256
1876	8,274	136,857	949	27,770	718	1,636	1,488,902	250,925	1,906,090
1877	11,380	164,557	978	27,300	785	1,966	1,554,499	169,045	1,917,367
1878	13,846	141,261	1,335	33,855	960	1,600	1,552,902	209,347	1,938,965
1879	18,419	186,545	1,430	38,880	1,830	3,660	1,473,924	238,388	1,941,397
1880	25,945	311,335	1,626	46,101	4,718	9,435	1,516,625	199,913	2,063,509
1881	36,137	431,392	2,247	80,985	11,926	23,852	1,538,757	202,835	2,277,821
1882	53,675	809,445	2,638	117,240	35,935	81,487	1,586,553	176,750	2,771,475
1883	52,505	1,045,776	3,617	126,492	37,383	85,162	1,545,709	345,144	3,148,274
1884	9,136	196,561	1,795	59,755	17,034	38,364	1,546,219	282,430	2,123,329
1885	19,947	419,931	2,943	88,701	22,318	52,223	1,527,720	390,100	2,478,675
1886	22,578	374,835	3,357	92,520	29,856	38,187	1,527,617	466,466	2,499,625
1887	23,517	322,801	2,882	86,200	48,924	74,555	1,496,091	1,052,407	3,032,054
1888	15,898	178,543	2,965	81,785	41,383	72,386	1,496,101	1,211,317	3,040,126
1889	16,862	188,387	3,450	92,285	44,320	77,756	1,496,102	1,287,704	3,142,234

UNITA COUNTY.

Years.	Cattle.		Horses.		Sheep.		Railroad property.	All other property.	Total valuation.
	No.	Value.	No.	Value.	No.	Value.			
1873	3,471	\$73,839	391	\$17,540	348	\$787	\$783,200	\$302,903	1,178,269
1874	3,708	68,265	702	27,210	298	643	736,825	389,019	1,221,962
1875	2,836	59,270	562	23,270	167	575	708,600	560,388	1,332,103
1876	3,988	63,530	571	18,375	145	653	872,042	504,865	1,459,465
1877	3,801	50,397	748	23,400	271	737	874,825	453,786	1,403,145
1878	5,359	66,870	642	22,130	425	1,104	940,229	433,169	1,463,502
1879	9,117	94,012	744	29,020	1,053	2,116	823,800	406,478	1,355,426
1880	9,681	96,220	806	24,285	22,488	44,976	824,000	360,242	1,349,723
1881	11,912	139,386	1,253	34,610	23,132	46,190	825,556	400,363	1,446,105
1882	16,017	193,460	1,631	50,750	65,117	130,378	1,043,400	769,444	2,187,492
1883	14,998	227,055	1,849	53,345	55,245	110,892	1,320,660	520,313	2,232,265
1884	15,215	307,850	2,288	75,043	42,484	85,618	1,317,256	446,355	2,232,152
1885	15,679	314,387	2,326	73,917	52,325	104,999	1,349,884	533,301	2,376,489
1886	15,154	322,921	2,973	92,575	67,057	85,852	1,347,160	731,888	2,480,396
1887	21,443	297,532	3,697	102,072	86,877	132,215	1,367,931	874,356	2,774,106
1888	23,454	266,209	4,836	136,821	89,525	180,426	1,368,296	1,014,827	2,966,579
1889	24,034	272,124	5,080	139,188	95,673	168,946	1,368,295	1,070,612	3,019,166

SHERIDAN COUNTY (FARM LANDS).

1888	36,788	424,340	5,506	170,185	3,739	5,626	420,335	170,469	1,190,957
1889	29,350	334,283	6,248	191,242	4,981	8,956	390,201	304,074	1,228,756

FREMONT COUNTY.

1884	64,228	\$1,366,160	4,089	\$135,872	33,000	\$66,000	.....	\$132,792	\$1,700,824
1885	76,324	1,526,480	5,389	153,100	49,128	79,298	.....	190,362	1,949,241
1886	85,719	1,390,916	7,785	246,395	50,970	64,328	.....	329,819	2,011,458
1887	86,260	1,203,576	6,428	259,375	55,527	86,411	.....	443,618	1,993,000
1888	74,390	843,647	7,901	214,460	48,045	79,651	.....	466,360	1,604,118
1889	75,772	872,022	8,710	259,258	68,528	122,478	.....	575,980	1,819,738

JOHNSON COUNTY.

1881	67,351	\$1,047,668	1,774	\$54,161	665	\$1,325	.....	\$156,827	\$1,259,981
1882	88,778	1,492,467	2,129	71,624	902	1,804	.....	157,719	1,723,614
1883	138,639	2,282,950	3,731	136,372	909	1,818	.....	207,349	2,628,489
1884	164,481	2,711,725	5,786	190,405	8,900	17,800	.....	504,178	3,424,108
1885	174,172	2,919,426	8,476	373,742	6,285	12,581	.....	475,541	3,781,290
1886	157,931	2,578,913	9,900	307,420	7,709	9,857	.....	634,076	3,530,266
1887	141,286	1,711,719	11,935	387,036	8,583	10,682	.....	1,228,984	3,348,421
1888	91,740	1,048,279	11,621	340,018	7,849	11,915	.....	1,280,003	2,680,305
1889	79,141	884,592	7,831	220,335	4,079	6,194	.....	852,527	1,963,648

CROOK COUNTY.

1885	115,942	\$2,126,544	4,982	\$166,309	4,531	\$6,793	.....	\$123,412	\$2,423,058
1886	155,518	2,501,592	6,794	199,610	6,379	8,187	.....	187,117	2,896,506
1887	85,136	1,175,842	7,100	273,293	4,979	7,703	.....	359,519	1,811,357
1888	82,550	933,368	8,413	256,002	3,536	7,015	.....	412,240	1,608,625
1889	124,118	1,372,927	10,831	314,828	2,915	4,813	.....	585,920	2,278,496

Statement showing assessed valuation of all property, by counties, in Wyoming, 1889.

	Laramie.	Albany.	Carbon.	Sweet-water.	Uinta.
Agricultural land and improvements.....	\$1,567,021	\$780,290	\$816,461	\$520,431	\$564,864
Town lots and improvements.....	2,070,976	1,126,714	233,697	325,697	237,435
Neat cattle.....	1,070,029	379,559	760,117	188,387	272,124
Horses.....	451,023	283,185	290,033	92,285	139,188
Mules and asses.....	11,485	9,995	18,595	10,500	4,855
Sheep.....	49,882	80,127	270,175	77,756	168,946
Swine.....	610	795	615	70	580
Musical instruments.....	9,722	8,165	4,837	4,635	6,426
Clocks, watches, jewelry, and plate.....	6,404	10,095	4,840	2,736	4,637
Capital in merchandise and manufacturing.....	766,432	209,460	155,232	93,710	133,762
Household furniture.....	38,831	14,460	10,538	7,190	11,668
Farming utensils and mechanics' tools.....	19,468	13,898	17,810	3,450	7,658
Stocks, shares, and corporations.....	375	150,490	42,550	.....	200
Carriages and vehicles.....	35,368	28,970	29,360	7,230	19,719
Moneys and credits.....	96,642	44,015	117,123	34,435	52,997
Property not enumerated.....	935,644	44,439	86,548	249,658	7,851
	7,129,914	3,184,657	2,858,561	1,618,170	1,632,910
Railroads.....	778,141	900,524	910,638	1,496,102	1,368,295
Telegraph lines.....	18,816	17,013	14,829	27,962	17,961
	7,926,871	4,122,194	3,784,028	3,142,234	3,019,166

	Johnson.	Fremont.	Crook.	Converse.	Sheridan	Grand total.
Agricultural land and improvements...	\$351,718	\$227,841	\$398,410	\$248,937	\$390,201	\$5,866,174
Town lots and improvements.....	208,960	130,161	67,587	124,844	95,934	4,622,005
Neat cattle.....	884,592	872,022	1,372,927	880,621	334,283	7,014,661
Horses.....	220,335	259,258	314,828	145,990	191,242	2,387,369
Mules and asses.....	10,880	14,875	10,100	11,060	8,445	110,790
Sheep.....	6,194	122,478	4,813	5,230	8,956	794,557
Swine.....	2,655	1,594	1,670	530	3,800	12,919
Musical instruments.....	2,172	2,247	2,260	1,849	2,438	44,751
Clocks, watches, jewelry, and plate.....	4,847	1,901	765	2,777	2,671	41,763
Capital in merchandise and manufacturing.....	96,905	76,610	57,265	101,106	53,280	1,743,762
Household furniture.....	11,562	2,753	2,602	1,565	1,865	103,036
Farming utensils and mechanics' tools.....	10,879	11,712	13,852	4,640	13,500	116,797
Stocks, shares, and corporations.....	31,343	2,155	.....	.....	27,404	254,517
Carriages and vehicles.....	19,054	27,110	14,535	4,640	16,015	208,726
Moneys and credits.....	50,225	44,752	4,925	2,550	57,020	504,684
Property not enumerated.....	51,327	22,177	11,957	10,345	21,702	1,441,648
	1,963,648	1,819,738	2,278,496	1,553,309	1,228,756	25,268,159
Railroads.....	.....	.....	.....	588,897	.....	6,062,597
Telegraph lines.....	.....	.....	.....	4,138	.....	100,739
	1,963,648	1,819,738	2,278,496	2,146,364	1,228,756	31,431,495

APPROPRIATIONS.

Table showing the appropriations made by the tenth biennial legislative assembly of Wyoming for the years 1888 and 1889, each amount being for two full fiscal years.

Board of equalization of stock, relief.....	\$927.95
Contingent expenses tenth legislative assembly.....	1,835.00
Council and house journals.....	350.00
Special auditing committee.....	200.00
Fireman and janitor's salary.....	390.00
Joint committee school laws.....	109.00
Equalization of stock.....	2,500.00
Care and transportation of ordnance.....	110.00
Special commissions Territorial treasurer.....	909.85
Sickness and funeral expenses of Hon. Nat. Huntington.....	351.05
Special appropriations for university.....	9,000.00
Reports of Territorial officers.....	750.00
Immigration expenses.....	2,500.00
Fish hatch-house.....	2,000.00
Assistant engineer.....	2,000.00
Engineer's contingent.....	3,000.00
Engineer's salary.....	5,000.00
Stenographer's salary.....	3,600.00
Stenographer's mileage.....	2,000.00
Auditing committee.....	600.00
Governor's contingent.....	2,400.00
Secretary's contingent.....	2,000.00
Attorney-general's contingent.....	600.00
Auditor's contingent.....	800.00
Treasurer's contingent.....	800.00
Librarian's salary.....	1,600.00
Fish commission salary.....	700.00
Fish contingent.....	4,500.00
Veterinarian's salary.....	5,000.00
Veterinarian's contingent.....	5,000.00
Attorney-general's salary.....	2,400.00
Treasurer's salary.....	800.00
Treasurer's commissions.....	2,500.00
Auditor's salary.....	2,400.00
Geologist's salary.....	3,600.00
Geologist's contingent.....	2,500.00
Coal inspector's salary.....	5,000.00
Coal inspector's contingent.....	2,500.00
Librarian's contingent.....	3,400.00
Library insurance.....	950.00
Library purchase.....	1,000.00
Inspectors of weights and measures, salary.....	200.00
Election returns.....	200.00
Juvenile delinquents.....	6,000.00
Penitentiary commission.....	2,500.00
Judges.....	3,000.00
Coal mining board.....	400.00
Fair premiums.....	5,000.00
Territorial building insurance.....	2,000.00
Relief of L. R. Meyer.....	15.00
Relief of John S. Russell.....	16.50
Relief of P. J. Quealy.....	215.04
Relief of Robert Smith.....	72.00
Veterinarian's report.....	50.00
Keep and transport prisoners.....	23,500.00
Penitentiary commission (1886 deficiency).....	300.00

Total appropriations Wyoming for two years 132,051.39

DISTANCES.

Official distances from Cheyenne, Wyo., to the following places (taken from table prepared by authority of the Secretary of War).

Places.	Distance.	Places.	Distance.
	<i>Miles.</i>		<i>Miles.</i>
Boston, Mass	2,151	Jacksonville, Fla	1,901
Baker City, Oregon	946	Kansas City, Mo	716
Blackfoot, Idaho	595	Laramie, Fort, Wyo	88
Boulder, Colo	92	Laramie City, Wyo	57
Carter, Wyo	388	Lincoln, Nebr	455
Chicago, Ill	1,006	Little Rock, Ark	1,186
Cincinnati, Ohio	1,233	Los Angeles, Cal	1,552
Cleveland, Ohio	1,350	Louisville, Ky	1,194
Custer, Fort, Mont	449	McKinney, Fort, Wyo	332
D. A. Russell, Fort, Wyo	3	Milwaukee, Wis	1,026
Davenport, Iowa	836	Minneapolis, Minn	880
Deming, N. Mex	868	Montreal, Canada	1,843
Denison, Tex	1,038	New York City, N. Y	1,918
Denver, Colo	106	Ogden, Utah	515
Des Moines, Iowa	660	Omaha, Nebr	516
Detroit, Mich	1,278	Philadelphia, Pa	1,827
Dubuque, Iowa	853	Portland, Oregon	1,303
Evanston, Wyo	439	Providence, R. I	2,011
Fetterman, Fort, Wyo	189	Rawlins, Wyo	193
Fort Worth, Tex	1,169	Rochester, N. Y	1,582
Fried Steele, Fort, Wyo	178	St. Louis, Mo	929
Freimont, Nebr	470	Salt Lake City, Utah	552
Galveston, Tex	1,432	San Diego, Cal	1,649
Granger, Wyo	353	San Francisco, Cal	1,348
Green River	329	Sante Fé, N. Mex	588
Hartford, Conn	1,939	Sidney, Nebr	102
Helena, Mont	922	Washakie, Fort, Wyo	340
Indianapolis, Ind	1,122	Washington, D. C	1,819
Jackson, Miss	1,414		

ALTITUDES.

CITIES, TOWNS, CAMPS, AND FORTS.

Names.	Altitude.	Names.	Altitude.
	<i>Feet.</i>		<i>Feet.</i>
Archer	6,035	Fort Aspenhut, abandoned	7,630
Aspen	7,809	Fort Bridger	6,753
Albany	6,820	Fort Fetterman (Platte bottom)	4,973
Atlantic City	7,666	Fort Halleck, abandoned	7,800
Barrel Springs	6,854	Fort Laramie	4,519
Baxter	6,300	Fort Phil Kearney abandoned	6,000
Bitter Creek	6,675	Fort Pinney, abandoned	7,580
Black Butte	6,548	Fort Russell	6,455
Boleter	4,325	Fort Sanders, abandoned	7,166
Bridger	6,758	Fort Stambaugh, abandoned	7,684
Bryan	6,323	Fort Steele	6,841
Buford	7,808	Gardiner's River Spring (Yellowstone Park)	6,100 to 6,500
Camp Brown (old Fort Washakie)	5,447	Geyser Basin, Lower	7,250
Camp Brown	5,498	Geyser Basin, Upper	7,400
Camp Stambaugh	7,767	Granite Cañon	7,327
Camp Walbach	6,449	Granger	6,252
Carbon	6,758	Green River	6,124
Carter	6,530	Greenville	6,560
Cheyenne	6,075	Hallville	6,590
Cheyenne Signal Bureau	6,058	Hampton	6,500
Church Buttes	6,298	Harney	7,882
Como	6,691	Hartville	4,700
Cooper's Lake	7,061	Hazard	6,357
Creston	7,026	Hillsdale	5,626
Dana	6,878	Howell	7,090
Deer Creek Agency, abandoned	5,000	Independence Rock	6,187
Devil's Gate	6,028	Jackson's Hole	6,000
Egbert	5,307	Laramie City	7,143
Encampment Meadows	8,171	Latham	6,900
Evanston	6,870	Lander	
Fairbank	4,620	Lawrence	6,200
Fillmore	6,885		

CITIES, TOWNS, CAMPS, AND FORTS—Continued.

Names.	Altitude.	Names.	Altitude.
	<i>Feet.</i>		<i>Feet.</i>
Leroy.....	7, 100	Rock Creek.....	6, 702
Lookout.....	7, 184	Sand Creek.....	.....
Marston.....	6, 245	St. Mary's.....	6, 265
Medicine Bow.....	6, 560	Salt Wells.....	6, 753
Miller.....	5, 908	Separation.....	6, 897
Millis.....	6, 790	Sherman.....	8, 269
Miser.....	6, 824	Simpson.....	6, 904
Mud Volcanoes (Yellowstone Park)...	7, 712	South Pass.....	7, 857
Otto.....	6, 754	Sulphur Springs (Yellowstone Park)...	7, 088
Pacific Springs.....	7, 144	Sun Dance.....	.....
Percy.....	6, 955	Sweetwater Bridge.....	7, 000
Piedmont.....	6, 500	Table Rock.....	6, 881
Pierre's Hole.....	6, 515	Three Crossings.....	6, 134
Pine Bluff.....	6, 400	Walbach Springs.....	6, 297
Point of Rocks.....	5, 061	Wolcott's.....	6, 800
Rawlins.....	6, 730	Washakie.....	6, 691
Red Buttes.....	7, 360	Wilcox.....	7, 033
Red Desert.....	6, 703	Wyoming City.....	7, 086

MOUNTAINS.

Name.	Mountain range.	Altitude.
		<i>Feet.</i>
Big Horn.....	.....	8, 000 to 12, 000
Black Butte.....	.....	8, 176
Bradley's Peak.....	Seminole.....	9, 500
Chimney Peak.....	Laramie.....	8, 168
Chimney Rock.....	Wind River.....	11, 853
Deer Mountain.....	Park.....	8, 377
Delham Peak.....	.....do.....	11, 524
Mount Doane.....	Yellowstone.....	10, 118
Elk Mountain.....	Medicine Bow.....	11, 511
Flat Mountain.....	.....	9, 704
Fremont's Peak.....	Wind River.....	13, 570
Grand Encampment.....	Park.....	11, 003
Mount Hayden.....	Teton.....	13, 838
Mount Haystack.....	.....	7, 689
Inyan Cara.....	Black Hills.....	6, 700
Iron Mountain.....	Laramie.....	6, 908
Laramie Peak.....	.....do.....	11, 000
Laramie Range.....	.....	7, 000 to 9, 000
Medicine Peak.....	Park.....	12, 231
Medicine Bow.....	.....	8, 000 to 12, 000
Mount Moran.....	Teton.....	12, 800
Muddy Mountain.....	Park.....	8, 012
Park range, in Wyoming.....	.....	11, 500
Phlox Mountain.....	Owl Creek.....	9, 136
Pine Bluff.....	.....	8, 878
Quaking Aspen.....	.....	8, 688
Quien Hornet.....	Utah.....	9, 300
Rawhide Peak.....	.....	6, 370
Red Mountain.....	.....	9, 806
River Butte.....	.....	7, 872
Rock Mountain.....	.....	6, 885
Sailor Mountain.....	.....	10, 646
St. Mary's Peak.....	.....	7, 722
Sander's Peak.....	.....	9, 077
Seminole Mountains (highest).....	.....	10, 500
Sheep Mountain.....	Park.....	9, 758
Sheep Butte.....	Medicine Bow.....	9, 722
Mount Sheridan.....	.....	10, 420
Mount Steele.....	Medicine Bow.....	7, 771
Table Rock.....	.....	7, 551
Washakie.....	Utah Range.....	7, 984
Washakie Needles.....	.....	12, 253
Mount Washburn.....	.....	10, 388
Young's Peak.....	Seminole.....	9, 000

RIVERS.

Names.	Altitude.	Names.	Altitude.
Big Horn:	<i>Feet.</i>	Yellowstone:	<i>Feet.</i>
At its source.....	7,527	Yellowstone Lake.....	7,788
Mouth Popo Agie.....	5,347	Top of Upper Falls (height of falls 140 feet).....	7,693
Leaves Big Horn Range.....	3,534	Top of Lower Falls (height of falls 397 feet).....	7,485
Green River:		Mouth of Tower Creek.....	6,207
At Green River City.....	6,130	Mouth of Gardner's River.....	5,360
North Platte:		Powder River:	
At Fort Steele.....	6,800	At Old Fort Reno.....	4,340
Fort Laramie.....	4,250	Clear Fork, Powder River.....	4,560
Twenty-five miles of Fort Laramie.....	3,985	Tongue River, average.....	3,500
Snake River:		Belle Fourche.....	3,736
Head.....	7,986	Chug Water, at mouth.....	4,500
Shoshone Lake.....	7,870		
Lewis' Lake.....	7,828		
Jackson's Lake.....	6,806		

HYPSOMETRIC AREAS.

The following table contains the hypsometric areas or elevations of land in Wyoming Territory:

Area between—	Square miles.
3,000 and 4,000 feet.....	3,000
4,000 and 5,000 feet.....	19,000
5,000 and 6,000 feet.....	20,000
6,000 and 7,000 feet.....	24,000
7,000 and 8,000 feet.....	17,000
8,000 and 9,000 feet.....	7,200
9,000 and 10,000 feet.....	4,300
10,000 and 11,000 feet.....	2,300
11,000 and 12,000 feet.....	900
12,000 and 13,000 feet.....	100
Total.....	97,800

WEATHER STATISTICS.

Rain-fall, mean temperature, direction of prevailing winds, and humidity at Cheyenne, Wyo., from 1871 to 1888.

RAIN-FALL.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total year.
	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>	<i>Inch.</i>
1871.....	0.28	0.07	0.11	0.95	2.04	2.25	1.27	0.36	0.74	0.24	0.66	0.16	9.13
1872.....	0.02	0.27	0.38	1.61	1.99	1.84	3.90	2.05	1.03	0.33	0.03	0.03	13.48
1873.....	0.03	0.02	0.38	0.92	2.41	1.77	1.10	2.07	0.36	0.70	0.17	0.80	10.73
1874.....	0.11	0.11	0.74	0.61	1.50	1.34	1.87	0.44	0.93	1.86	0.04	0.16	9.71
1875.....	0.42	0.06	0.23	0.50	1.20	0.29	4.47	2.12	1.34	0.60	0.84	0.03	12.10
1876.....	0.02	0.06	0.54	0.23	2.50	0.10	0.79	0.26	0.00	0.00	0.52	0.21	5.13
1877.....	0.20	0.14	0.98	1.11	2.24	1.27	0.43	0.83	2.02	1.99	0.17	0.33	11.71
1878.....	0.08	0.13	1.16	0.19	4.46	1.71	1.43	2.50	0.75	0.04	0.00	0.19	12.64
1879.....	0.32	0.20	0.44	1.66	1.30	0.07	1.04	1.26	0.00	0.65	0.23	0.17	7.34
1880.....	0.20	0.09	0.06	0.17	0.44	1.06	1.88	2.23	1.05	0.76	0.36	0.08	8.38
1881.....	0.36	0.22	0.32	2.32	1.14	1.19	1.40	1.97	1.75	0.88	0.29	0.01	11.85
1882.....	0.14	0.05	0.06	0.46	2.73	1.85	2.30	0.23	0.35	0.31	0.06	0.10	8.64
1883.....	0.88	0.25	0.85	2.76	3.68	3.67	1.45	2.18	0.90	1.66	0.16	0.80	19.24
1884.....	0.76	0.26	1.59	1.33	4.83	1.50	0.60	2.07	1.25	0.50	0.18	0.67	15.54
1885.....	0.16	1.31	0.51	3.76	1.33	2.75	1.91	2.14	0.69	0.28	1.11	0.16	16.11
1886.....	0.52	0.84	1.36	1.14	0.32	1.52	0.71	1.61	1.05	0.37	.....	.....	.....
1887.....	.....	.....	0.06	0.80	0.24	0.29	0.84	0.36	0.78	0.25	0.16	0.11	.....
1888.....	0.29	0.72	2.04	0.94	3.74	0.56	2.31	1.15	1.66	0.30	0.57	0.21	14.49
Mean.....	0.28	0.34	0.66	1.19	2.12	1.39	1.65	1.43	0.92	0.65	0.31	0.25	11.63

TEMPERATURE.

	Maxi- mum.	Date.	Mini- mum.	Date.	Mean of year.	Prevail- ing wind.	Humid- ity.
	°		°		°		°
1872.....	.....	.....	-14	Dec. 21	43.3	W.	51.8
1873.....	94	July 5	-17	Jan. 27	44.7	W.	48.3
1874.....	98	July 4	-24	Feb. 24	45.5	W.	48.1
1875.....	93	June 21	-38	Jan. 9	42.7	NW.	59.7
1876.....	96	July 6	-14	Dec. 24	44.3	NW.	49.7
1877.....	96	July 5	-14	Jan. 22	44.2	NW.	55.2
1878.....	92	July 14	-12	Dec. 25	44.2	NW.	57.4
1879.....	95	July 12	-24	Dec. 24	46.3	W.	45.4
1880.....	97	July 19	-24	Dec. 28	42.9	NW.	44.5
1881.....	100.5	July 14	-12	Feb. 14	45.8	NW.	52.5
1882.....	96	Aug. 1	-15.5	Nov. 12	43.9	NW.	47.9
1883.....	94.2	July 1	-31.3	Jan. 20	42.4	NW.	52.6
1884.....	93.4	June 27	-28.2	Feb. 12	42.6	NW.	56.0
1885.....	89.9	July 15	-18.6	Jan. 16	44.0	NW.	63.6
1888.....	97.2	July 11	-27.2	Jan. 14	44.5	NW.	50.4

UNITED STATES PUBLIC-LAND LAWS.

The following information concerning the public-land laws will be useful to those desiring knowledge on the subject:

All lands which are for sale or other disposal by the Government under general laws are known as public lands, and are divided into land districts, in each of which is a land office presided over by two officers, known respectively as the register and receiver.

There are three of these land districts in this Territory.

The register and receiver act as agents for the Government, and patents will be issued for all lands sold or otherwise disposed of by them, if approved by the Commissioner of the General Land Office, Washington, D. C.

Agricultural lands are disposed of to actual settlers only under the homestead, pre-emption, and timber-culture laws.

Desert lands are such as will not produce crops without irrigation by artificial means.

Within the limits of railroad grants only the even-numbered sections are disposed of by the Government, and these are known as *double-minimum* land, and when entered under the pre-emption law the price is \$2.50 per acre.

Outside the railroad limits the land is known as *minimum* land, and is sold at \$1.25 per acre.

Citizenship is required, or a declaration to become a citizen of the United States, before any public lands can be taken in this Territory.

Only one claim can be taken by the same person under each of the public-land laws of the United States.

THE HOMESTEAD LAW.

Every citizen of the United States who is over twenty-one years of age, or the head of a family, can take 160 acres of the public lands (agricultural) by establishing a residence thereon and cultivating the same in good faith as a home for five years from the date of settlement; or if, after six months' residence and cultivation, such persons so desire, they may commute their homestead claim by paying the Government price therefor; or, if a soldier or sailor in the Army or Navy of the United States during the recent rebellion, and honorably discharged, the time of his service will be deducted from the five years' residence required. But in such cases a residence of one year on the land becomes necessary before patent will be issued.

THE PRE-EMPTION LAW.

Residence, cultivation, and sufficient improvements to show the good faith of the claimant are required.

One hundred and sixty acres can be taken of agricultural land; qualification as to age and citizenship is the same as under the homestead law. The claimant must not be the owner of 320 acres of land, nor leave land of his own in this Territory (town lot excepted) in order to settle upon a pre-emption claim, nor take such claim for the purpose of speculation instead of residence and cultivation.

The good faith of every claimant must be clearly established.

He may change his pre-emption filing to a homestead by making proper application to the land office. Not less than six months' residence and improvement are required by law before payment can be made.

On *offered* lands the declaratory statement must be filed within thirty days, and the final proof made within one year from the date of settlement. On *unoffered* lands the declaratory statement must be filed within three months, and the final proof made within thirty-three months from the date of settlement.

The price for minimum land is \$1.25, and for double-minimum land \$2.50 per acre.

TIMBER-CULTURE LAW.

Qualifications of claimant the same as to age, citizenship, and good faith.

Amount of land, 160 acres. Land must be devoid of timber. During the first year at least 5 acres must be plowed. The second year said 5 acres must be actually cultivated to crop, and a second 5 acres plowed. The third year the first 5 acres must be planted in timber, seeds, or cuttings, and the second 5 acres actually cultivated to crop. The fourth year the second 5 acres must be planted in timber, seeds, or cuttings, making at the end of the fourth year 10 acres thus planted.

If the claim is less than 160 acres the area plowed and planted will be in the same proportion as for 160 acres; that is, one-sixteenth of the claim. Not less than 2,700 trees must be planted on each acre, and there must be at least 675 living trees on each acre to entitle the claimant to patent at the expiration of eight years from date of entry.

Residence in the Territory is not required for timber-culture.

COAL-LAND LAWS.

Same qualifications as to age and citizenship.

One person can purchase 160 acres of coal land. If within 15 miles of a completed railroad the price is \$20 per acre; if outside that distance, \$10. An association of persons may purchase 320 acres, or an association of not less than four persons, who make an expenditure of \$5,000 upon their claim, may purchase 640 acres, including their improvements.

Coal-land declaratory statements must be filed within sixty days, and proof and payment made within one year from date of possession.

MINING LAWS.

The mining laws of Wyoming are similar to those of other mining States and Territories.

DESERT-LAND LAW.

Any person, a citizen or one who has declared his intentions, twenty-one years of age, can file on 640 acres in compact form, not longer than $1\frac{1}{2}$ miles, by paying 25 cents an acre at filing, proving up within three years (and paying \$1 more) by conveying water on it, cultivating a hay or other crop, and reclaiming it from its desert character, and is entitled, upon proof, to obtain a patent for it.

A declaration is made by the party, with two witnesses, of desert and non-mineral character, sworn to before land office or clerk of court of record. Can be filed on unsurveyed land. They are not assignable. No fees to officers. Final proof must show cultivation and reclamation. Copy of declaration of intention must accompany final proof; also record proof of water-right, if any.

If the three years' limitation has expired affidavits must be made with satisfactory reasons for delay before final proof. If the time passes by and the claim is contested, it is lost.

Residence in the Territory is not required in desert entries, nor is applicant obliged to appear at the land office when filing or at proof, but witnesses must be present.

TIME OF HOLDING COURTS.

SUPREME COURT.

Chief justice, Willis Van Devanter; associate justices, Micah C. Sanfley, Samuel T. Corn; clerk, James R. Whitehead. General term held at Cheyenne on the third Monday in January of each year.

FIRST JUDICIAL DISTRICT.

Composed of Laramie, Converse, and Crook Counties, Judge Willis Van Devanter presiding; residence, Cheyenne.

General terms held at Cheyenne for Laramie County on the fourth Monday in May and on the second Monday in November in each year; clerk, Frank H. Clark, Cheyenne.

At Sundance, for Crook County, one term, on the first Tuesday in August of each year; John S. Harper, deputy clerk, Sundance.

At Douglas, for Converse County, at such times as the judge and county commissioners may designate; Nathan E. Burns, deputy clerk, Douglas.

SECOND JUDICIAL DISTRICT.

Composed of Albany, Johnson, and Sheridan Counties, Judge Micah C. Sanfley presiding; residence, Laramie City.

General terms held at Laramie City, for Albany County, on the second Monday in March and on the second Monday in October in each year; clerk, Charles T. Gale, Laramie City.

At Buffalo, for Johnson County, on the fourth Monday in June and on the second Monday in December in each year; ——— Hill, deputy clerk, Buffalo. At Sheridan, for Sheridan County, at such times as the judge and county commissioner may designate; B. F. Perkins, deputy clerk, Sheridan.

THIRD JUDICIAL DISTRICT.

Composed of Uinta, Sweetwater, Carbon, and Fremont Counties, Judge Samuel T. Corn, presiding; residence, Evanston.

General terms at Evanston, for Uinta County, on the first Monday in April and on the first Monday in September in each year; clerk, John Stone, Evanston.

At Green River City, for Sweetwater County, on the fourth Monday in April and on the fourth Monday in September in each year; Alfred Young, deputy clerk, Green River City.

At Rawlins, for Carbon County, on the second Monday in May and on the second Monday in October in each year; ——— Chrisman, deputy clerk, Rawlins.

At Lander, for Fremont County, on the first Monday in July of each year; Benjamin F. Sheldon, deputy clerk, Lander.

OFFICERS OF THE TERRITORY.

FEDERAL.

Position.	Name.	Location.
Governor.....	Francis E. Warren ..	Cheyenne.
Secretary of Territory.....	John W. Meldrum	Do.
Chief Justice.....	Willis Van Devanter...	Do.
Associate Justice.....	M. C. Sanfley	Laramie.
Associate Justice.....	Samuel T. Corn	Evanston.
United States Attorney	A. G. Campbell	Cheyenne.
United States Marshal	Thomas J. Carr	Do.
Surveyor-General	W. E. Richards	Do.
United States Revenue Collector	James F. Benedict....	Denver.
United States Deputy Revenue Collector.....	F. A. Stitzer	Cheyenne.
	E. P. Champlin.....	Do.
Registers of Land Offices.....	A. L. New	Evanston.
	H. C. Mann	Buffalo.
	LeRoy Grant	Cheyenne.
Receivers of Public Moneys.....	W. T. Shaffer	Evanston.
	John J. Orr	Buffalo.

TERRITORIAL.

Position.	Name.	Location.
Delegate in Congress	Joseph M. Carey	Cheyenne.
Attorney-General	Hugo Donzelman	Do.
Auditor and ex-officio Insurance Commissioner	M. N. Grant	Laramie.
Treasurer	Luke Voorhees	Cheyenne.
Librarian and ex-officio Superintendent of Public In- struction	John D. Slaughter	Do.
Hydraulic Engineer	Elwood Mead	Do.
Penitentiary Commissioners	Colin Hunter	Do.
	Timothy Dyer	Do.
	Timothy Kinney	Rock Springs.
	Louis Miller	Laramie.
Fish Commissioner	Robert C. Morris	Cheyenne.
Stenographer	C. G. Epperson	Evanston.
Inspector of Coal Mines	Louis D. Ricketts	Cheyenne.
Geologist and Mining Engineer	A. A. Holcombe	Do
Veterinarian	Lester C. Baker	Do
Private Secretary to Governor	J. H. Finfrook	Laramie.
Board of Trustees of the University of Wyoming	Edward Iverson	Do
	W. H. Holliday	Do
	A. S. Peabody	Do
	J. Y. Cowhick	Cheyenne.
	G. W. SeEVERS	Do
	John C. Davis	Rawlins.
Board of Trustees of the Institute for the Support and Education of the Deaf, Dumb, and Blind	George C. Rafter	Cheyenne.
	E. W. Whitcomb	Do
	C. A. Campbell	Do
Board of Commissioners of the Insane Asylum	A. C. Beckwith	Evanston.
	William Crawford	Do
	Charles Stone	Do
Commissioners of Pharmacy	A. Richard Troxell	Cheyenne.
	Fred P. Shannon	Carbon.
	William C. Wilson	Laramie.
	R. F. Glover	Cheyenne
	C. H. Grinnell	Sheridan.
	Dan C. Bacon	Laramie.
Live Stock Commissioners	Frank Earnest	Rawlins.
	Abner Luman	Rock Springs.
	Harvey Booth	Evanston.
	R. H. Hall	Lyons.
	H. A. Hoffman	Theresa.
	Fred C. S. Hesse	Cra.
	J. C. Spencer	Custer City, Dak.
Capitol Building Commission	L. R. Bresnahan	Cheyenne.
	T. A. Kent	Do
	Arthur Poole	Do
	J. C. Baird	Do
Penitentiary Building Commission	Andrew Gilchrist	Do
	I. C. Miller	Rawlins.
	J. E. Osborne	Do
	J. P. Wallace	Do
Poor Asylum Building Commission	N. Baldwin	Lander.
	J. F. Ludin	Do
	E. Amoretti	Do

Members-elect to the eleventh legislative assembly of Wyoming; convenes January 14, 1890.

Name.	District.	Residence.	Name.	District.	Residence.
<i>Council.</i>			<i>House of Representatives—Cont'd.</i>		
Colin Hunter	First	Cheyenne.	Frank H. Clark *	First	Cheyenne.
Alexander H. Reel	do	Do.	Stephen W. Downey	Second	Laramie.
Charles A. Campbell	do	Do.	Jerome S. Atherly	do	Sherman.
Augustus Trabing	Second	Laramie.	William Taylor	do	Rock Creek.
John McGill	do	Rock Creek.	Jabez B. Simpson	do	Laramie.
R. M. Galbraith	Third	Rawlins.	David L. Rusk	Third	Rawlins.
G. W. Burdick	do	Saratoga.	W. L. Evans	do	Do.
Tim. Kinney	Fifth	Rock Springs.	J. P. Rankin	do	Do.
Andrew B. Liggett	Sixth	Evanston.	Dave G. Thomas	Fifth	Rock Springs.
M. Murphy	Seventh	Lander.	James H. Brown	do	Do.
George T. Beck	Eighth	Buffalo.	Alef. G. Rex	Sixth	Evanston.
Joseph L. Stotts	Ninth	Sundance.	Thomas Snedden	do	Do.
<i>House of Representatives.</i>			W. A. Carter	do	Fort Bridger.
William R. Schnitger	First	Cheyenne.	W. D. Pickett	Seventh	Meeteetse.
Fredric S. Hebard	do	Do.	Charles H. Burrett	Eighth	Buffalo.
Alexander Bowie	do	Chug Water.	John McCormick	Ninth	Sheridan.
William E. Guthrie	do	Cheyenne.	O. P. Kellogg	Tenth	Sundance.
Frank A. Roedell	do	Do.	Mortimer Jesurun	Eleventh	Douglas.
			Edward C. David	Twelfth	Glenrock.

* Registered, special election called for November 5, 1889, to fill his place.

List of county officers of Wyoming for the term of two years from January, 1889.

ALBANY COUNTY.

Position.	Name.	County seat.
Sheriff	Charles Yund	Laramie.
County clerk	C. W. Spalding	Do.
Probate judge and county treasurer	Otto Graum	Do.
County and prosecuting attorney	H. V. S. Groesbeck	Do.
Coroner	J. H. Hayford	Do.
Assessor	H. R. Ingham	Do.
Superintendent of schools	H. L. Stevens	Do.
Surveyor	W. O. Owen	Do.

CARBON COUNTY.

Sheriff	F. W. Hadsell	Rawlins.
County clerk	B. S. Ross	Do.
Probate judge and county treasurer	F. Chatterton	Do.
County and prosecuting attorney	D. H. Craig	Do.
Coroner	J. A. Bennett	Do.
Assessor	W. G. Reader	Do.
Superintendent of schools	G. W. Barr	Do.
Surveyor	J. M. Sterrett	Do.

CROOK COUNTY.

Sheriff	J. W. Rogers	Sundance.
County clerk	A. C. Settle	Do.
Probate judge and county treasurer	F. M. Pettigrew	Do.
County and prosecuting attorney	H. A. Alden	Do.
Coroner	N. H. Baker	Do.
Assessor	W. J. McCrea	Do.
Superintendent of schools	Cora Hill	Do.
Surveyor	J. B. Boyden	Do.

List of county officers of Wyoming, etc.—Continued.

CONVERSE COUNTY.

Position.	Name.	County seat.
Sheriff	J. T. Williams	Douglas.
County clerk	C. M. Garver	Do.
Probate judge and county treasurer	C. E. Clay	Do.
County and prosecuting attorney	F. H. Harvey	Do.
Coroner	W. F. Longer	Do.
Assessor	Sam. Slaymaker	Do.
Superintendent of schools	Cornelia M. Lusk	Do.
Surveyor	A. T. Seymour	Do.

FREMONT COUNTY.

Sheriff	A. M. Sparhawk	Lander.
County clerk	J. A. McAvoy	Do.
Probate judge and county treasurer	M. N. Baldwin	Do.
County and prosecuting attorney	Charley Allen	Do.
Coroner	W. A. Feiser	Do.
Assessor	P. P. Dickinson	Do.
Superintendent of schools	Mary A. Mason	Do.
Surveyor	F. S. Wood	Do.

JOHNSON COUNTY.

Sheriff	W. G. Angus	Buffalo.
County clerk	W. A. Evans	Do.
Probate judge and county treasurer	G. W. Munkies	Do.
County and prosecuting attorney	H. S. Elliott	Do.
Coroner	F. H. Eggleston	Do.
Assessor	J. T. Wall	Do.
Superintendent of schools	N. L. Andrews	Do.
Surveyor	J. E. Shannon	Do.

LARAMIE COUNTY.

Sheriff	John A. Martin	Cheyenne.
County clerk	I. L. Fredendall	Do.
Probate judge and county treasurer	Isaac Bergman	Do.
County and prosecuting attorney	W. R. Stoll	Do.
Coroner	J. T. Chadlin	Do.
Assessor	T. J. Fisher	Do.
Superintendent of schools	Josephine W. Breckons	Do.
Surveyor	F. H. Jones	Do.

SWEETWATER COUNTY.

Sheriff	Thomas Whitmore	Green River.
County clerk	F. I. Grunell	Do.
Probate judge and county treasurer	Alfred Young	Do.
County and prosecuting attorney	H. B. Conway	Do.
Coroner	J. T. Treasure	Do.
Assessor	W. W. Patterson	Do.
Superintendent of schools	Mrs. S. Sheddon	Do.
Surveyor .....	.....	.....

SHERIDAN COUNTY.

Sheriff	J. M. Enochs	Sheridan.
County clerk	Frank McCoy	Do.
Probate judge and county treasurer	J. P. Robinson	Do.
County and prosecuting attorney	W. J. Stover	Do.
Coroner	W. F. Green	Do.
Assessor	J. Morrow	Do.
Superintendent of schools	Minnie E. Paxton	Do.
Surveyor	D. F. Hinkley	Do.

List of county officers of Wyoming, etc.—Continued.

UINTA COUNTY.

Position.	Name.	County seat.
Sheriff	J. H. Ward	Evanston.
County clerk	J. R. Arnold	Do.
Probate judge and county treasurer	F. H. Harrison	Do.
County and prosecuting attorney	Jesse Knight	Do.
Coroner	Henry Code	Do.
Assessor	William Beveridge	Do.
Superintendent of schools	E. W. Hinchman	Do.
Surveyor	G. A. Johnson	Do.

Notaries public in Wyoming.

[Appointed for two years.]

ALBANY COUNTY.

Name.	Post-office address.	Term expires.
Arnold, C. P.	Laramie	Mar. 6, 1890
Bauman, A. M.	do	Aug. 5, 1891
Blake, J. W.	do	Apr. 10, 1890
Butler, H. R.	do	Apr. 12, 1891
Corthell, Nellis E.	do	Nov. 14, 1889
Fishback, W. H.	do	Oct. 24, 1889
Fox, George W.	do	Jan. 4, 1891
George, Charles J.	do	Mar. 23, 1890
Groesbeck, Herman	do	Aug. 14, 1890
Hansen, A. C.	do	Jan. 2, 1891
Hills, W. J.	do	Nov. 11, 1889
Hiskey, E. D.	do	June 29, 1891
Hiskey, W. W.	do	Dec. 19, 1890
Jahren, M. C.	do	Jan. 19, 1890
Jennings, Mark	do	Oct. 24, 1889
Jewell, George M.	do	Oct. 7, 1891
Neil, Henry B.	Tie Siding	Mar. 12, 1890
Ott, F. W.	Laramie	Jan. 19, 1890
Pease, L. D.	do	Jan. 16, 1890
Symons, John H.	do	June 22, 1891
Taylor, William	Rock Creek	Feb. 23, 1891
Thomas, William D.	Laramie	June 25, 1891
Vine, James	do	Nov. 18, 1889
Wilkinson, C. W.	do	Jan. 18, 1891

CARBON COUNTY.

Blydenburgh, Charles E.	Rawlins	Sept. 21, 1891
Bothwell, A. J.	Sweetwater	Nov. 25, 1889
Buchanan, Milford L.	Dixon	Sept. 30, 1891
Calvert, J. M.	Baggs	Feb. 9, 1891
Caldwell, George R.	Saratoga .....	.....
Craig, D. H.	Rawlins	Sept. 12, 1890
Clark, William	Searight	Apr. 20, 1890
Crawford, J. F.	Saratoga	Aug. 6, 1890
Dodge, C. E.	Rawlins	Feb. 1, 1891
Emery, B. F.	Casper	Aug. 6, 1890
Erway, J. E.	Oil City	Apr. 19, 1890
Fetz, Henry B.	Sweetwater	Aug. 22, 1891
Finley, John M.	Dixon	May 14, 1890
Friend, John C.	Rawlins	Oct. 24, 1889
Heath, Alfred	Saratoga	Dec. 13, 1890
Henderson, H. B.	Rawlins	Aug. 8, 1890
Hoeker, Melville E.	do	Apr. 29, 1891
Howard, Henry H.	do	June 15, 1891
Huntington, G. M.	do	May 28, 1890
Klinkenbeard, John L.	Medicine Bow	May 7, 1891
Lane, Charles H.	Carbon	Jan. 18, 1890
Jones, John S.	Elk Mountain	Mar. 12, 1890
McCoy, M. W.	Casper	Jan. 2, 1891
McNamard, P. T.	Oil City	Apr. 19, 1890

Notaries public in Wyoming—Continued.

CARBON COUNTY—Continued.

Name.	Post-office address.	Term expires.
Merrell, Homer.....	Rawlins.....	July 22, 1891
Minta, Thomas O.....	Carbon.....	July 1, 1891
Smith, George C.....	Rawlins.....	Mar. 11, 1891
Stanley, Herbert.....	do.....	Oct. 13, 1890
Sterrett, James M.....	Saratoga.....	June 13, 1890
Rumsey, James M., jr.....	Rawlins.....	Jan. 4, 1891
Trobridge, William M.....	Dixon.....	Nov. 10, 1890
Wright, Carl C.....	Casper.....	Sept. 10, 1890

CONVERSE COUNTY.

Abbott, Mark M.....	Glenrock.....	Nov. 8, 1889
Adamsky, Simon.....	Lusk.....	May 28, 1890
Booth, G. Mouson.....	Glenrock.....	May 31, 1890
Butler, Alex. T.....	Douglas.....	June 1, 1890
Callkins, J. K.....	Lusk.....	Dec. 26, 1890
Callander, H. N.....	do.....	June 22, 1891
Camplin, M. B.....	Douglas.....	Aug. 6, 1890
Foster, J. W.....	do.....	May 28, 1890
Goddard, D. E.....	Lusk.....	Sept. 18, 1891
Harrison, F. B.....	Glenrock.....	Nov. 9, 1889
Harrison, Stanley.....	Tolland.....	June 15, 1890
Higby, Harry L.....	Manville.....	Feb. 23, 1891
Kinball, Emerson H.....	Glenrock.....	May 28, 1890
Lonabaugh, E. E.....	Lusk.....	May 28, 1890
Manrer, C. F.....	Douglas.....	May 28, 1890
Prescott, Daniel.....	Glenrock.....	May 28, 1890
Richardson, Sumner J.....	Lusk.....	Feb. 1, 1891
Seymour, A. T.....	Glenrock.....	May 28, 1890
Sheffer, John A.....	Manville.....	May 28, 1890
Wilson, Thomas G.....	do.....	May 28, 1890

CROOK COUNTY.

Adams, Milo A.....	Sundance.....	Sept. 7, 1890
Alden, H. A.....	do.....	Feb. 1, 1891
Baker, Daniel C.....	Fisher Post-office.....	June 5, 1890
Barrett, F. M.....	Sundance.....	May 11, 1891
Baird, W. M.....	do.....	Jan. 30, 1890
Davis, L. E.....	do.....	Jan. 2, 1891
Davis, B. F.....	Burlington.....	Aug. 3, 1891
Durrett, George M.....	Sundance.....	May 18, 1891
Fowler, B. F.....	do.....	Jan. 18, 1891
Frank, Meyer.....	do.....	Sept. 12, 1891
Hooper, Tom.....	do.....	Dec. 15, 1890
Howard, O. F.....	do.....	Jan. 19, 1890
Metz, W. S.....	do.....	Sept. 6, 1890
Mondell, Frank W.....	Custer, Dak.....	Dec. 31, 1890
Monroe, C. H.....	Sundance.....	June 13, 1891
Jackson, George S.....	Nigger Hill.....	Aug. 14, 1891
Pearson, John.....	Sundance.....	Oct. 6, 1890
Pettigrew, T. M.....	do.....	Nov. 10, 1889
Seabury, G. T.....	Inyan Kara.....	Dec. 17, 1890
Scott, Richard H.....	Sundance.....	Dec. 15, 1890

FREMONT COUNTY.

Allen, Charley.....	Lander.....	May 28, 1890
Bates, Charles E.....	do.....	Feb. 26, 1891
Brown, N. H.....	do.....	Feb. 8, 1890
DeBarthe, Joseph.....	do.....	Jan. 21, 1891
Hank, Elmer.....	Shoshone Agency.....	Oct. 1, 1891
Lawn, Edward.....	Atlantic City.....	Aug. 28, 1891
Norton, J. T.....	Lander.....	June 19, 1890
Parks, Samuel C., jr.....	do.....	Nov. 25, 1889
Patten, James I.....	do.....	May 24, 1890
Signor, Eli A.....	Rongis.....	Oct. 24, 1889
Sullivan, J. W.....	Lander.....	Sept. 22, 1890
Woods, Frank S.....	Meeteetse.....	Nov. 18, 1889
Wright, Fred T.....	Lander.....	Aug 9, 1891

Notaries public in Wyoming—Continued.

JOHNSON COUNTY.

Name.	Post-office address.	Term expires.
Bennett, Alvin	Buffalo	Jan. 8, 1891
Collins, W. S.	Bonanza	Apr. 18, 1891
Mann, H. R.	Buffalo	Aug. 25, 1890
Martin, John T.	do	Oct. 24, 1889
Menardi, J. B.	do	May 25, 1890
Reiman, Joseph	do	May 31, 1891
Richards, William R.	Red Bank	Nov. 30, 1890
Sittig, E. J.	Buffalo	June 7, 1890
Tisdale, John N.	Powder River	Aug. 25, 1890

LARAMIE COUNTY.

Abry, Emile A.	Cheyenne	June 9, 1890
Adams, Thomas B.	do	July 18, 1891
Abbott, George E.	do	Aug. 6, 1891
Baker, Valentine	do	Aug. 5, 1891
Beard, George L.	do	June 4, 1891
Bond, Fred	do	Do.
Brown, Fanny R.	do	May 16, 1890
Bruner, J. W.	do	July 13, 1891
Chapin, John	do	June 19, 1890
Churchill, Edward J.	do	April 30, 1890
Clark, Frank H.	do	Feb. 6, 1891
Corson, Samuel	do	Jan. 8, 1891
Cudebec, George	Archer	July 20, 1891
Davidson, Bradford B.	Iron Mountain	June 18, 1891
Evans, Elsworth E.	Cheyenne	April 10, 1890
Donzelman, Hugo	do	do
Fisher, T. J.	do	Jan. 7, 1890
Fisher, J. W.	do	Apr. 28, 1890
Force, William H.	do	Feb. 5, 1891
Foss, Frank W.	Chug Water	May 3, 1890
Freeborn, J. D.	Cheyenne	do
Glover, R. F.	do	Apr. 6, 1890
Gordon, John H.	Little Horse Creek	Dec. 6, 1889
Gill, J. D.	Cheyenne	Jan. 23, 1891
Hauphoff, J. J.	do	Aug. 7, 1890
Hebard, Frederic S.	do	July 8, 1891
Jackson, Robert	Egbert	Apr. 20, 1890
Johnson, Marshall	Cheyenne	June 1, 1890
Jones, C. S.	Pine Bluffs	Apr. 25, 1890
Kabis, L.	Cheyenne	May 17, 1890
Kirk, Edward B.	do	Mar. 21, 1890
Kuykendall, W. L.	do	May 18, 1891
Larsh, Walter L.	do	Aug. 8, 1890
Lowrey, Amiz G.	Rawhide Buttes	June 27, 1891
Mann, Edgar W.	Cheyenne	May 7, 1891
McCann, John K.	Hartville	May 1, 1890
Morgan, G. F.	Cheyenne	Sept. 10, 1891
Morris, Robert C.	do	Oct. 15, 1891
McRae, D. A.	do	Feb. 6, 1890
Norton, John T.	do	Nov. 11, 1889
Offley, Robert S.	Fort Russell	May 25, 1891
Peterson, F. M.	Pine Bluffs	Apr. 23, 1890
Pratt, J. G.	Cheyenne	Oct. 11, 1891
Ransom, Fred W.	do	May 14, 1890
Repath, Richard H.	do	April 9, 1891
Richards, W. A.	Fort Laramie	Feb. 23, 1891
Schnitzer, William R.	do	Mar. 11, 1891
Sheldon, F. B.	do	May 24, 1891
Stahle, Ed. F.	do	June 5, 1891
Stanley, G. W.	do	Feb. 6, 1891
Stanton, Frederick J.	do	Mar. 23, 1891
Stewart, Charles W.	do	Apr. 29, 1891
Sützer, Frank A.	do	Oct. 2, 1890
Stoll, W. R.	do	May 16, 1890
Tuttle, S. B.	do	Apr. 5, 1890
Wilkes, W. J.	do	Jan. 19, 1890

Notaries public in Wyoming.

[Appointed for two years.]

SHERIDAN COUNTY.

Alger, H. C	Sheridan	May 26, 1890
Coffeen, H. A	do	Do.
Cotton, Thomas M	do	Do.
Helvey, John D	do	May 31, 1890
Robinson, jr., H. N	do	Feb. 1, 1891
Stover, W. J	do	May 26, 1890
Wolfe, J. T	Big Horn	Do.

SWEETWATER COUNTY.

Daus, L. L	Rock Springs	Aug. 6, 1890
Hereford, Robert L	Burnt Fork	Oct. 20, 1890
Kenball, Augustine	Rock Springs	Aug. 12, 1891

UINTA COUNTY.

Bartlett, Samuel J	Afton	Nov. 4, 1889
Call, Anson B	do	Apr. 25, 1891
Clark, Clarence D	Evanston	Feb. 9, 1891
Goodell, William	Cokeville	Mar. 24, 1890
Groshon, Maurice	Fort Bridger	May 17, 1890
Head, Hadley B	Evanston	Nov. 30, 1890
Hinton, William	do	Jan. 30, 1890
Knight, Jesse	do	Sept. 3, 1891
McKay, Hugh	Big Piney	Nov. 25, 1889
Post, William S	Ham's Fork	Aug. 5, 1891
Ryckman, James H	Evanston	May 11, 1891
White, Earle C	do	Sept. 17, 1890
White, Leroy H	do	Oct. 31, 1890

Water commissioners.

District.	Name.	Post-office.	Term expires.
No. 1	W. D. Pease	Cheyenne	April 12, 1891
No. 2	Charles Bellamy	Laramie	
No. 3	Frank O. Williams	Saratoga	June 10, 1891
No. 5*	John E. Shannon	Buffalo	Oct. 15, 1891
No. 6	Albert Weaver	Sundance	July 15, 1891
No. 7	W. H. Moss	Evanston	
No. 8	Samual Iiams	Lander	
No. 9	John Wilkes	Afton	July 26, 1891

* District No. 4 not yet organized.

Commissioners of deeds for Wyoming.

[Appointed for two years.]

States.	Name.	Post-office address.	Term expires.
California	Joseph P. Perkins	Santa Barbara	Jan. 17, 1890
Do	James E. Mills	Sacramento	Oct. 23, 1890
Do	James L. King	San Francisco	Jan. 2, 1891
Dakota	John R. Jones	Deadwood	Sept. 9, 1891
District of Columbia	John E. Beall	Washington	May 1, 1890
Do	Charles S. Bundy	do	Aug. 6, 1890
Illinois	Julian E. Buckbee	Chicago	Feb. 6, 1890
Do	Frank P. Craudon	do	Aug. 6, 1890
Do	Simon W. King	do	Jan. 2, 1891
Do	Philip A. Hoyne	do	July 1, 1891

Commissioners of deeds for Wyoming—Continued.

States.	Name.	Post-office address.	Term expires.
Louisiana	M. C. Soniah	New Orleans	Mar. 6, 1890
Kansas	J. W. Waggener	Atchison	Oct. 17, 1890
Massachusetts	Frank D. Butrick	Boston	May 22, 1890
Do	Edward J. Jones	do	Oct. 4, 1890
Do	Samuel Jennison	do	Oct. 17, 1890
Do	Charles Hall Adams	do	Jan. 2, 1891
Nebraska	W. J. Carroll	Omaha	Nov. 10, 1890
New York	Frank B. Wilson	New York City	Oct. 24, 1889
Do	George H. Corey	do	Nov. 16, 1889
Do	Frank W. Fullerton	do	Dec. 13, 1889
Do	Ella F. Braman	do	Dec. 3, 1889
Do	Gerard C. Green	do	Sept. 6, 1890
Do	Charles Nettleton	do	Nov. 20, 1890
Do	W. H. Osborne	do	Jan. 4, 1891
Do	Eleazer Jackson	do	Mar. 11, 1891
Do	John A. Hillery	do	Do,
Do	Frederick A. Burnham	do	Apr. 4, 1891
Do	Joseph B. Braman	do	Apr. 25, 1891
Ohio	Joseph T. Harrison	Cincinnati	Nov. 29, 1889
Do	Gabriel Netter	do	Apr. 10, 1890
Do	Lipman Levy	do	Sept. 17, 1890
Oregon	Eugene D. White	Portland	Jan. 19, 1890
Pennsylvania	Samuel L. Taylor	Philadelphia	June 28, 1890
Do	Thomas J. Hunt	do	Oct. 8, 1890
Do	William Jenks Dell	do	Feb. 5, 1891

STATEHOOD PRELIMINARIES.

In my inaugural address on assuming office, April 9, 1889, I expressed a willingness to co-operate with the people in their efforts towards securing admission. During the month of May a majority of the counties petitioned as follows:

RESOLUTIONS ADOPTED BY COUNTY COMMISSIONERS.

Whereas this board of county commissioners is satisfied, from an examination of Senate bill No. 2445, as unanimously and favorably reported to the United States Senate by the Committee on Territories, that its provisions are absolutely fair for all sections of the Territory of Wyoming; and

Whereas the board is satisfied that there should be immediate action, as there would be greater probability of success by literally and speedily following the provisions of this bill: Therefore be it

Resolved, That this board pledges itself to put into operation the election machinery under the laws of the Territory for the election of delegates to a constitutional convention, and the submission of such constitution as may be presented by the said convention to the people of this county for ratification or rejection, if the governor, chief justice, and secretary of the Territory shall in their wisdom see fit to take the initiatory steps under the provisions of said Senate bill for calling into existence a constitutional convention.

Resolved, That the chairman of this board be instructed to present copies of this resolution to the governor, chief justice, and secretary, with the request that if other counties of the Territory make similar requests they shall divide the Territory into districts, apportion the number of delegates to the several districts or counties, and do such other acts as may be necessary for the convening of such constitutional convention in the manner and form as is provided by the terms of said Senate bill.

APPORTIONMENT FOR DELEGATES.

Whereas the board of county commissioners of seven-tenths of the counties in the Territory of Wyoming have adopted resolutions requesting the governor, chief justice, and secretary to divide the Territory into delegate districts, to apportion the number of delegates among the several districts, and to do such other acts as may be neces-

sary for the convening of a constitutional convention in the manner and form provided by the terms of Senate bill 2445, as reported with amendments to the Senate of the United States on February 27, 1889, by the Committee on Territories; and

Whereas by the terms of said Senate bill it is provided, "The aforesaid delegates to form said convention shall be apportioned within the limits of the proposed State in such districts as may be established, as herein provided, in proportion to the population in each of said districts, as near as may be, to be ascertained at the time of making said apportionment by the persons hereinafter authorized to make the same, upon the basis of the votes cast for Delegate in Congress at the last general election, in each of which districts the number of delegates apportioned to such district shall be elected. That said apportionment shall be made by the governor, the chief justice, and the secretary of the Territory. * * * The number of delegates to said convention shall be fifty-five:"

Now, therefore, we, the governor, chief justice, and secretary of the Territory of Wyoming, do certify that, in pursuance of the said resolutions and of the aforesaid provisions of said Senate bill, we did convene at the capitol, in the city of Cheyenne, on this 3d day of June, 1889, and did then proceed to divide the Territory into delegate districts, and to apportion the number of delegates among the several districts in proportion to the population in each of said districts, as near as may be, upon the basis of the votes cast for Delegate in Congress at the last general election, to wit, on the 6th day of November, 1888. The total number of votes cast for Delegate in Congress at the last general election was 18,010, and the total number of votes cast in each of the counties in the Territory was as follows, to wit:

Laramie County	3, 695
Albany County	2, 608
Carbon County	2, 633
Sweetwater County	1, 747
Uinta County	2, 037
Fremont County	1, 047
Johnson County	916
Sheridan County	870
Crook County	1, 150
Converse County	1, 307
Total	18, 010

It was deemed best to divide the Territory into ten delegate districts, and to make each county a separate district. On dividing the total number of votes cast at said last general election by the number of delegates to be elected, it was ascertained that one delegate should be accredited to each 327 votes, and proceeding upon this basis, the several counties are entitled to delegates as follows: Laramie County, 11 delegates; Albany County, 8 delegates; Carbon County, 8 delegates; Sweetwater County, 5 delegates; Uinta County, 6 delegates; Fremont County, 3 delegates; Johnson County, 3 delegates; Sheridan County, 3 delegates; Crook County, 4 delegates; and Converse County, 4 delegates, making a total of 55 delegates.

We therefore certify that we have this day divided the Territory into the following delegate districts, and apportioned the number of delegates among the several districts as follows, to wit:

1. The county of Laramie shall constitute the first district and shall elect eleven delegates.
2. The county of Albany shall constitute the second district and shall elect eight delegates.
3. The county of Carbon shall constitute the third district and shall elect eight delegates.
4. The county of Sweetwater shall constitute the fourth district and shall elect five delegates.
5. The county of Uinta shall constitute the fifth district and shall elect six delegates.
6. The county of Fremont shall constitute the sixth district and shall elect three delegates.
7. The county of Sheridan shall constitute the seventh district and shall elect three delegates.
8. The county of Johnson shall constitute the eighth district and shall elect three delegates.
9. The county of Crook shall constitute the ninth district and shall elect four delegates.
10. The county of Converse shall constitute the tenth district and shall elect four delegates.

We believe that this Territory is justly entitled to admission as a State, and that it is for the best interests of the Territory and its people that a constitution should be

adopted and a State government organized, and application respectfully and earnestly made to the Congress of the United States for the immediate admission of the proposed State of Wyoming.

In witness whereof we have hereunto set our hands at Cheyenne this third day of June, 1889.

FRANCIS E. WARREN,
Governor.

W. L. MAGINNIS,
Chief Justice.

S. D. SHANNON,
Secretary.

PROCLAMATION BY THE GOVERNOR.

Whereas the Territory of Wyoming has the population, material resources, public intelligence, and morality necessary to insure a stable local government therein; and

Whereas it has never been deemed a violation of their duties as loyal citizens of the United States for the people of a Territory to form for themselves a constitution and State government and to apply to Congress for admission to statehood; and

Whereas, on the 27th day of February, 1889, a bill, with amendments, entitled "A bill to provide for the formation and admission into the Union of the State of Wyoming, and for other purposes," was favorably reported to the Senate of the United States by the Committee on Territories; and a bill providing, among other things, for the admission of the proposed State of Wyoming having been reported favorably to the House of Representatives by a like committee; and many members of the House and Senate having expressed opinions favorable to such admission; and it thus being made evident that Congress is disposed to admit Wyoming as a State whenever a suitable constitution is adopted and a State government is formed preparatory to admission; and

Whereas, by the general expression of the citizens thereof, the executive is convinced that a very large majority of the people of Wyoming are desirous of forming for themselves a constitution and State government, and of being admitted into the Union, and of exercising the rights and privileges guaranteed to a free and loyal people under the Constitution of the United States; and

Whereas the board of county commissioners of several counties in the Territory have, by resolution, requested the governor to call a constitutional convention, and have requested the governor, chief justice, and secretary of the Territory to divide the Territory into delegate districts, to apportion the number of delegates among the several districts, and to do such other acts as may be necessary for the convening of such constitutional convention in the manner and form provided by the terms of the said Senate bill; and

Whereas the governor, chief justice, and secretary of the Territory, on this third day of June, 1889, did convene at the capitol in the city of Cheyenne, and did apportion the number of delegates among the several districts so established, upon the basis of the vote cast for delegate in Congress at the last general election, as follows, to wit:

1. The county of Laramie shall constitute the first district and shall elect eleven delegates;
2. The county of Albany shall constitute the second district and shall elect eight delegates;
3. The county of Carbon shall constitute the third district and shall elect eight delegates;
4. The county of Sweetwater shall constitute the fourth district and shall elect five delegates;
5. The county of Uinta shall constitute the fifth district and shall elect six delegates;
6. The county of Fremont shall constitute the sixth district and shall elect three delegates;
7. The county of Sheridan shall constitute the seventh district and shall elect three delegates;
8. The county of Johnson shall constitute the eighth district and shall elect three delegates;
9. The county of Crook shall constitute the ninth district and shall elect four delegates;
10. The county of Converse shall constitute the tenth district and shall elect four delegates;

Now, therefore, recognizing the superior and material advantages of a State government over our Territorial system, and being desirous of carrying into effect the

will of the people, I, Francis E. Warren, governor of the Territory of Wyoming, do issue this, my proclamation, to the people of the Territory, recommending that they take such action on their part as may be necessary to secure the admission of Wyoming into the Union of States; and for this purpose I direct that an election be held throughout the Territory, on the second Monday of July, 1889, for the election of delegates to a constitutional convention to convene at Cheyenne, the capital of the Territory, at 12 o'clock noon of the first Monday of September, 1889, for the purpose of framing a constitution for the State of Wyoming, and for the purpose of submitting such constitution to the people thereof for their ratification or rejection.

I suggest that, in organizing a State government preparatory to admission, the provisions of the aforesaid Senate bill should be followed as nearly as may be possible; and in pursuance thereof the following recommendations are hereby made:

First.—The number of delegates to such constitutional convention shall be fifty-five, apportioned among the several districts as hereinbefore set forth.

Second.—The delegates apportioned to each district shall be elected exclusively in that district.

Third.—Persons who are qualified by the laws of the Territory to vote for representatives to the legislative assembly thereof are hereby authorized to vote for and choose delegates to such constitutional convention.

Fourth.—The qualifications for delegates to such constitutional convention shall be such as, by the laws of the Territory, persons are required to possess to be eligible to the legislative assembly thereof.

Fifth.—Such election shall be conducted, the returns made, the result ascertained, and the certificates to persons elected to such convention issued, in the same manner as is prescribed by the laws of the Territory regulating elections therein for delegate to Congress.

Sixth.—Since the advantages to be obtained by statehood will depend somewhat upon the judicious action of the constitutional convention, it is desirable that the delegates should be representative men, of character and ability, whose work will be satisfactory to Congress and beneficial to the people of the proposed State of Wyoming. The character and fitness of the delegates to be chosen is in fact of greater importance than the manner of their selection, and if the citizens of any county generally prefer to elect their delegates by some equitable method other than that heretofore prescribed, it is believed that the delegates so chosen will be recognized and admitted to seats in the convention.

Seventh.—The constitution formed by such convention shall be submitted to the people of the Territory for ratification or rejection on the first Tuesday in November, 1889.

Eighth.—The convention should fix the per diem and mileage of its members and employes, and certificates of service and expenditure should be made by the officers of the convention and filed with the Secretary of the Territory, as Congress will, without doubt, follow its own precedents in providing for the payment thereof.

In testimony whereof I have hereunto set my hand and caused the great seal of the Territory of Wyoming to be affixed at Cheyenne, the capital, on this third day of June, in the year of our Lord one thousand eight hundred and eighty-nine, and of the independence of the United States of America the one hundred and thirteenth.

[SEAL.]

FRANCIS E. WARREN.

By the governor:

SAMUEL D. SHANNON,
Secretary of Territory.

PROPOSED CONSTITUTION OF THE STATE OF WYOMING.

PREAMBLE.

We, the people of the State of Wyoming, grateful to God for our civil, political, and religious liberties, and desiring to secure them to ourselves and perpetuate them to our posterity, do ordain and establish this Constitution.

ARTICLE No. I.

DECLARATION OF RIGHTS.

SECTION 1. All power is inherent in the people, and all free governments are founded on their authority, and instituted for their peace, safety, and happiness; for the advancement of these ends they have at all times an inalienable and indefeasible right

to alter, reform, or abolish the government in such manner as they may think proper.

SEC. 2. In their inherent right to life, liberty, and the pursuit of happiness all members of the human race are equal.

SEC. 3. Since equality in the enjoyment of natural and civil rights is only made sure through political equality, the laws of this State affecting the political rights and privileges of its citizens shall be without distinction of race, color, sex, or any circumstance or condition whatsoever other than individual incompetency or unworthiness, duly ascertained by a court of competent jurisdiction.

SEC. 4. The right of the people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures shall not be violated, and no warrant shall issue but upon probable cause, supported by affidavit, particularly describing the place to be searched or the person or thing to be seized.

SEC. 5. No person shall be imprisoned for debt except in cases of fraud.

SEC. 6. No person shall be deprived of life, liberty, or property without due process of law.

SEC. 7. Absolute, arbitrary power over the lives, liberty, and property of freemen exists nowhere in a republic, not even in the largest majority.

SEC. 8. All courts shall be open and every person, for an injury done to person, reputation, or property, shall have justice administered without sale, denial, or delay. Suits may be brought against the State in such manner and in such courts as the legislature may by law direct.

SEC. 9. The right of trial by jury shall remain inviolate in criminal cases, but a jury in civil cases in all courts, or in criminal cases in courts not of record, may consist of less than twelve men, as may be prescribed by law. Hereafter a grand jury may consist of twelve men, any nine of whom concurring may find an indictment, but the legislature may change, regulate, or abolish the grand-jury system.

SEC. 10. In all criminal prosecutions the accused shall have the right to defend in person and by counsel, to demand the nature and cause of the accusation, to have a copy thereof, to be confronted with the witnesses against him, to have compulsory process served for obtaining witnesses, and to a speedy trial by an impartial jury of the county or district in which the offense is alleged to have been committed.

SEC. 11. No person shall be compelled to testify against himself in any criminal case, nor shall any person be twice put in jeopardy for the same offence. If the jury disagree, or if the judgment be arrested after a verdict, or if the judgment be reversed for error in law, the accused shall not be deemed to have been in jeopardy.

SEC. 12. No person shall be detained as a witness in any criminal prosecution longer than may be necessary to take his testimony or deposition, nor be confined in any room where criminals are imprisoned.

SEC. 13. Until otherwise provided by law, no person shall, for a felony, be proceeded against criminally, otherwise than by indictment, except in cases arising in the land or naval forces, or in the militia when in actual service in time of war or public danger.

SEC. 14. All persons shall be bailable by sufficient sureties, except for capital offences when the proof is evident or the presumption great. Excessive bail shall not be required, nor excessive fines imposed, nor shall cruel or unusual punishment be inflicted.

SEC. 15. The penal code shall be framed on the humane principles of reformation and prevention.

SEC. 16. No person arrested and confined in jail shall be treated with unnecessary rigor. The erection of safe and comfortable prisons, and inspection of prisons, and the humane treatment of prisoners shall be provided for.

SEC. 17. The privilege of the writ of habeas corpus shall not be suspended unless, when in case of rebellion or invasion, the public safety may require it.

SEC. 18. The free exercise and enjoyment of religious profession and worship without discrimination or preference shall be forever guaranteed in this State, and no person shall be rendered incompetent to hold any office of trust or profit, or to serve as a witness or juror, because of his opinion on any matter of religious belief whatever, but the liberty of conscience hereby secured shall not be so construed as to excuse acts of licentiousness or justify practices inconsistent with the peace or safety of the State.

SEC. 19. No money of the State shall ever be given or appropriated to any sectarian or religious society or institution.

SEC. 20. Every person may freely speak, write, and publish on all subjects, being responsible for the abuse of that right; and in all trials for libel, both civil and criminal, the truth, when published with good intent and justifiable ends, shall be a sufficient defense, the jury having the right to determine the facts and the law, under direction of the court.

SEC. 21. The right of petition, and of the people peaceably to assemble to consult for the common good, and to make known their opinions, shall never be denied or abridged.

SEC. 22. The rights of labor shall have just protection through laws calculated to secure to the laborer proper rewards for his service and to promote the industrial welfare of the State.

SEC. 23. The right of citizens to opportunities for education should have practical recognition. The legislature shall suitably encourage means and agencies calculated to advance the sciences and liberal arts.

SEC. 24. The right of citizens to bear arms in defense of themselves and of the State shall not be denied.

SEC. 25. The military shall ever be in strict subordination to the civil power. No soldier in time of peace shall be quartered in any house without consent of the owner, nor in time of war except in the manner prescribed by law.

SEC. 26. Treason against the State shall consist only in levying war against it, or in adhering to its enemies, or in giving them aid and comfort. No person shall be convicted of treason unless on the testimony of two witnesses to the same overt act, or on confession in open court; nor shall any person be attainted of treason by the legislature.

SEC. 27. Elections shall be open, free, and equal, and no power, civil or military, shall at any time interfere to prevent an untrammelled exercise of the right of suffrage.

SEC. 28. No tax shall be imposed without the consent of the people or their authorized representatives. All taxation shall be equal and uniform.

SEC. 29. No distinction shall ever be made by law between resident aliens and citizens as to the possession, taxation, enjoyment, and descent of property.

SEC. 30. Perpetuities and monopolies are contrary to the genius of a free State, and shall not be allowed. Corporations being creatures of the State, endowed for the public good with a portion of its sovereign powers, must be subject to its control.

SEC. 31. Water being essential to industrial prosperity, of limited amount, and easy of diversion from its natural channels, its control must be in the State, which, in providing for its use, shall equally guard all the various interests involved.

SEC. 32. Private property shall not be taken for private use unless by consent of the owner, except for private ways of necessity, and for reservoirs, drains, flumes, or ditches on or across the lands of others for agricultural, mining, milling, domestic, or sanitary purposes, nor in any case without due compensation.

SEC. 33. Private property shall not be taken or damaged for public or private use without just compensation.

SEC. 34. All laws of a general nature shall have a uniform operation.

SEC. 35. No *ex post facto* law, nor any law impairing the obligation of contracts, shall ever be made.

SEC. 36. The enumeration of this constitution of certain rights shall not be construed to deny, impair, or disparage others retained by the people.

SEC. 37. The State of Wyoming is an inseparable part of the Federal Union, and the Constitution of the United States is the supreme law of the land.

ARTICLE NO. II.

DISTRIBUTION OF POWERS.

SECTION 1. The powers of the government of this State are divided into three distinct departments: The legislative, executive, and judicial, and no person or collection of persons charged with the exercise of powers properly belonging to one of these departments shall exercise any powers properly belonging to either of the others, except as in this constitution expressly directed or permitted.

ARTICLE NO. III.

LEGISLATIVE DEPARTMENT.

SECTION 1. The legislative power shall be vested in a senate and house of representatives, which shall be designated "The legislature of the State of Wyoming."

SEC. 2. Senators shall be elected for the term of four (4) years and representatives for the term of two (2) years. The senators elected at the first election shall be divided by lot into two classes as nearly equal as may be. The seats of senators of the first class shall be vacated at the expiration of the first two years, and of the second class at the expiration of four years. No person shall be a senator who has not attained the age of twenty-five years, or a representative who has not attained the age of twenty-one years, and who is not a citizen of the United States and of this State, and who has not, for at least twelve months next preceding his election, resided within the county or district in which he was elected.

SEC. 3. Each county shall constitute a senatorial and representative district; the

senate and house of representatives shall be composed of members elected by the legal voters of the counties, respectively, every two (2) years. They shall be apportioned among the said counties as nearly as may be according to the number of their inhabitants. Each county shall have at least one senator and one representative; but at no time shall the number of members of the house of representatives be less than twice nor greater than three times the number of members of the senate. The senate and house of representatives first elected in pursuance of this constitution shall consist of sixteen and thirty-three members, respectively.

SEC. 4. When vacancies occur in either house by death, resignation, or otherwise, such vacancy shall be filled for the remainder of the term by special election, to be called in such manner as may be prescribed by law.

SEC. 5. Members of the senate and house of representatives shall be elected on the day provided by law for the general election of a member of Congress, and their term of office shall begun on the first Monday of January thereafter.

SEC. 6. Each member of the first legislature, as a compensation for his services, shall receive five dollars for each day's attendance, and fifteen cents for each mile traveled in going to and returning from the seat of government to his residence by the usual traveled route, and shall receive no other compensation, perquisite, or allowance whatever. No session of the legislature after the first, which may be sixty days, shall exceed forty days. After the first session the compensation of the members of the legislature shall be as provided by law; but no legislature shall fix its own compensation.

SEC. 7. The legislature shall meet at the seat of government at twelve o'clock noon on the second Tuesday of January next succeeding the general election provided by law, and at twelve o'clock noon on the second Tuesday of January of each alternate year thereafter, and at other times when convened by the governor.

SEC. 8. No senator or representative shall, during the term for which he was elected, be appointed to any civil office under the State, and no member of Congress or other person holding an office (except that of notary public or an office in the militia) under the United States or this State shall be a member of either house during his continuance in office.

SEC. 9. No member of either house shall, during the term for which he was elected, receive any increase of salary or mileage under any law passed during such term.

SEC. 10. The senate shall, at the beginning and close of each regular session and at such other times as may be necessary, elect one of its members president, the house of representatives shall elect one of its members speaker, each house shall choose its other officers, and shall judge of the election returns and qualifications of its members.

SEC. 11. A majority of each house shall constitute a quorum to do business, but a smaller number may adjourn from day to day, and compel the attendance of absent members in such manner and under such penalties as each house may prescribe.

SEC. 12. Each house shall have power to determine the rules of its proceedings, and punish its members or other persons for contempt or disorderly behavior in its presence; to protect its members against violence or offers of bribes or private solicitation, and with the concurrence of two-thirds to expel a member, and shall have all other powers necessary to the legislature of a free State. A member expelled for corruption shall not thereafter be eligible to either house of the legislature; and punishment for contempt or disorderly behavior shall not bar a criminal prosecution for the same offense.

SEC. 13. Each house shall keep a journal of its proceedings, and may, in its discretion, from time to time publish the same, except such parts as require secrecy, and the yeas and nays on any question shall, at the request of any two members, be entered on the journal.

SEC. 14. The sessions of each house and of the committee of the whole shall be open, unless the business is such as requires secrecy.

SEC. 15. Neither house shall, without the consent of the other, adjourn for more than three days, nor to any other place than that in which the two houses shall be sitting.

SEC. 16. The members of the legislature shall, in all cases except treason, felony, violation of their oath of office, and breach of the peace, be privileged from arrest during their attendance at the sessions of their respective houses, and in going to and returning from the same; and for any speech or debate in either house they shall not be questioned in any other place.

SEC. 17. The sole power of impeachment shall vest in the house of representatives, the concurrence of a majority of all the members being necessary to the exercise thereof. Impeachment shall be tried by the senate sitting for that purpose, and the senators shall be upon oath or affirmation to do justice according to law and evidence. When the governor is on trial the chief justice of the supreme court shall preside. No person shall be convicted without a concurrence of two-thirds of the senators elected.

SEC. 18. The governor and other State and judicial officers, except justices of the peace, shall be liable to impeachment for high crimes and misdemeanors, or malfeasance in office, but judgment in such cases shall only extend to removal from office and disqualification to hold any office of honor, trust, or profit under the laws of the State. The party, whether convicted or acquitted, shall, nevertheless, be liable to prosecution, trial, judgment, and punishment according to law.

SEC. 19. All officers not liable to impeachment shall be subject to removal for misconduct or malfeasance in office in such manner as may be provided by law.

SEC. 20. No law shall be passed except by bill and no bill shall be so altered or amended on its passage through either house as to change its original purpose.

SEC. 21. The enacting clause of every law shall be as follows: "Be it enacted by the legislature of the State of Wyoming."

SEC. 22. No bill for the appropriation of money, except for the expenses of the government, shall be introduced within five (5) days of the close of the session except by unanimous consent of the house in which it is sought to be introduced.

SEC. 23. No bill shall be considered or become a law unless referred to a committee, returned therefrom, and printed for the use of the members.

SEC. 24. No bill, except general appropriation bills and bills for the codification and general revision of the laws, shall be passed containing more than one subject, which shall be clearly expressed in its title; but if any subject is embraced in any act which is not expressed in the title, such act shall be void only as to so much thereof as shall not be so expressed.

SEC. 25. No bill shall become a law, except by a vote of a majority of all the members elected to each house; nor unless on its final passage the vote taken by ayes and noes, and the names of those voting be entered on the journal.

SEC. 26. No law shall be revised or amended, or the provisions thereof extended by reference to its title only, but so much thereof as is revised, amended, or extended, shall be re-enacted and published at length.

SEC. 27. The legislature shall not pass local or special laws in any of the following enumerated cases, that is to say: For granting divorces; laying out, opening, altering, or working roads or highways; vacating roads, town plats, streets, alleys, or public grounds; locating or changing county seats; regulating county or township affairs; incorporation of cities, towns, or villages, or changing or amending the charters of any cities, towns, or villages; regulating the practice in courts of justice; regulating the jurisdiction and duties of justices of the peace, police magistrates, or constables; changing the rules of evidence in any trial or inquiry; providing for changes of venue in civil or criminal cases; declaring any person of age; for limitation of civil actions; giving effect to any informal or invalid deeds; summoning or impanneling grand or petit juries; providing for the management of common schools; regulating the rate of interest on money; the opening or conducting of any election, or designating the place of voting; the sale or mortgage of real estate belonging to minors or others under disability; chartering or licensing ferries or bridges or toll roads; chartering banks, insurance companies, and loan and trust companies; remitting fines, penalties, or forfeitures; creating, increasing, or decreasing fees, percentages, or allowances of public officers; changing the law of descent; granting to any corporation, association, or individual the right to lay down railroad tracks, or any special or exclusive privilege, immunity, or franchise whatever, or amending existing charter for such purpose; for punishment of crimes; changing the names of persons or places; for the assessment or collection of taxes; affecting estates of deceased persons, minors, or others under legal disabilities; extending the time for the collection of taxes; refunding money paid into the State treasury; relinquishing or extinguishing, in whole or in part, the indebtedness, liabilities, or obligation of any corporation or person to this State or to any municipal corporation therein; exempting property from taxation; restoring to citizenship persons convicted of infamous crimes; authorizing the creation, extension, or impairing of liens; creating offices or prescribing the powers or duties of officers in counties, cities, townships, or school districts; or authorizing the adoption or legitimation of children. In all other cases where a general law can be made applicable no special law shall be enacted.

SEC. 28. The presiding officer of each house shall, in the presence of the house over which he presides, sign all bills and joint resolutions passed by the legislature immediately after their titles have been publicly read, and the fact of signing shall be at once entered upon the journal.

SEC. 29. The legislature shall prescribe by law the number, duties, and compensation of the officers and employes of each house, and no payment shall be made from the State treasury, or be in any way authorized to any such person except to an acting officer or employe elected or appointed in pursuance of law.

SEC. 30. No bill shall be passed giving any extra compensation to any public officer, servant or employe, agent or contractor, after services are rendered or contract made.

SEC. 31. All stationery, printing, paper, fuel, and lights used in the legislature and other departments of government shall be furnished, and the printing and binding

of the laws, journals, and department reports, and other printing and binding, and the repairing and furnishing the halls and rooms used for the meeting of the legislature and its committees shall be performed under contract, to be given to the lowest responsible bidder, below such maximum price and under such regulations as may be prescribed by law. No member or officer of any department of the Government shall be in any way interested in any such contract; and all such contracts shall be subject to the approval of the governor and State treasurer.

SEC. 32. Except as otherwise provided in this constitution, no law shall extend the term of any public officer or increase or diminish his salary or emoluments after his election or appointment; but this shall not be construed to forbid the legislature from fixing the salaries or emoluments of those officers first elected or appointed under this constitution, if such salaries or emoluments are not fixed by its provisions.

SEC. 33. All bills for raising revenue shall originate in the house of representatives; but the senate may propose amendments as in case of other bills.

SEC. 34. The general appropriation bills shall embrace nothing but appropriations for the ordinary expenses of the legislative, executive, and judicial departments of the State, interest on the public debt, and for public schools. All other appropriations shall be made by separate bills, each embracing but one object.

SEC. 35. Except for interest on public debt money shall be paid out of the treasury only on appropriations made by the legislature, and in no case otherwise than upon warrant drawn by the proper officer in pursuance of law.

SEC. 36. No appropriation shall be made for charitable, industrial, educational, or benevolent purposes to any person, corporation, or community not under the absolute control of the State, nor to any denominational or sectarian institution or association.

SEC. 37. The legislature shall not delegate to any special commissioner, private corporation or association any power to make, supervise, or interfere with any municipal improvements, moneys, property, or effects, whether held in trust or otherwise, to levy taxes, or to perform any municipal functions whatever.

SEC. 38. No act of the legislature shall authorize the investment of trust funds by executors, administrators, guardians, or trustees in the bonds or stock of any private corporation.

SEC. 39. The legislature shall have no power to pass any law authorizing the State or any county in the State to contract any debt or obligation in the construction of any railroad, or give or loan its credit to or in aid of the construction of the same.

SEC. 40. No obligation or liability of any person, association, or corporation, held or owned by the State, or any municipal corporation therein shall ever be exchanged, transferred, remitted, released, or postponed, or in any way diminished by the legislature; nor shall such liability or obligation be extinguished, except by the payment thereof into the proper treasury.

SEC. 41. Every order, resolution, or vote in which the concurrence of both houses may be necessary, except on the question of adjournment, or relating solely to the transaction of the business of the two houses, shall be presented to the governor, and before it shall take effect be approved by him, or, being disapproved, be re-passed by two-thirds of both houses, as prescribed in the case of a bill.

SEC. 42. If any person elected to either house of the legislature shall offer or promise to give his vote or influence in favor of or against any measure or proposition, pending or to be introduced into the legislature in consideration or upon condition that any other person elected to the same legislature will give, or promise or assent to give, his vote or influence in favor of or against any other measure or proposition pending or proposed to be introduced into such legislature, the person making such offer or promise shall be deemed guilty of solicitation of bribery. If any member of the legislature shall give his vote or influence for or against any measure or proposition pending or to be introduced in such legislature, or offer, promise or assent thereto, upon condition that any other member will give or will promise or assent to give his vote or influence in favor of or against any other measure or proposition pending or to be introduced in such legislature, or in consideration that any other member has given his vote or influence for or against any other measure or proposition in such legislature, he shall be deemed guilty of bribery, and any member of the legislature, or person elected thereto, who shall be guilty of either of such offenses shall be expelled and shall not thereafter be eligible to the legislature, and on conviction thereof in the civil courts shall be liable to such further penalty as may be prescribed by law.

SEC. 43. Any person who shall directly or indirectly offer, give, or promise any money or thing of value, testimonial, privilege, or personal advantage, to any executive or judicial officer or member of the legislature, to influence him in the performance of any of his official duties shall be deemed guilty of bribery, and be punished in such manner as shall be provided by law.

SEC. 44. Any person may be compelled to testify in any lawful investigation or judicial proceeding against any person who may be charged with having committed the offense of bribery or corrupt solicitation, or practices of solicitation, and shall not

be permitted to withhold his testimony upon the ground that it may criminate himself or subject him to public infamy; but such testimony shall not afterwards be used against him in any judicial proceedings, except for perjury in giving such testimony, and any person convicted of either of the offenses aforesaid shall, as part of the punishment therefor, be disqualified from holding any office or position of honor, trust, or profit in this State.

SEC. 45. The offense of corrupt solicitation of members of the legislature or of public officers of the State, or of any municipal division thereof, and the occupation or practice of solicitation of such members or officers to influence their official action shall be defined by law, and shall be punishable by fine and imprisonment.

SEC. 46. A member who has a personal or private interest in any measure or bill proposed or pending before the legislature shall disclose the fact to the house of which he is a member, and shall not vote thereon.

APPORTIONMENT.

SEC. 1. One representative in the Congress of the United States shall be elected from the State at large the Tuesday next after the first Monday in November, 1890, and thereafter at such times and places and in such manner as may be prescribed by law. When a new apportionment shall be made by Congress the legislature shall divide the State into Congressional districts accordingly.

SEC. 2. The legislature shall provide by law for an enumeration of the inhabitants of the State in the year 1895, and every tenth year thereafter, and at the session next following such enumeration, and also at the session next following an enumeration made by the authority of the United States, shall revise and adjust the apportionment for senators and representatives on a basis of such enumeration, according to ratios to be fixed by law.

SEC. 3. Representative districts may be altered from time to time as public convenience may require. When a representative district shall be composed of two or more counties, they shall be contiguous, and the districts as compact as may be. No county shall be divided, in the formation of representative districts.

SEC. 4. Until an apportionment of senators and representatives as otherwise provided by law, they shall be divided among the several counties of the State in the following manner:

Albany County, two senators and five representatives.

Carbon County, two senators and five representatives.

Converse County, one senator and three representatives.

Crook County, one senator and two representatives.

Fremont County, one senator and two representatives.

Laramie County, three senators and six representatives.

Johnson County, one senator and two representatives.

Sheridan County, one senator and two representatives.

Sweetwater County, two senators and three representatives.

Uinta County, two senators and three representatives.

ARTICLE No. 4.

EXECUTIVE DEPARTMENT.

SECTION 1. The executive power shall be vested in a governor, who shall hold his office for the term of four (4) years, and until his successor is elected and duly qualified.

SEC. 2. No person shall be eligible to the office of governor unless he be a citizen of the United States and a qualified elector of the State, who has attained the age of thirty years, and who has resided five years next preceding the election within the State or Territory, nor shall he be eligible to any other office during the term for which he was elected.

SEC. 3. The governor shall be elected by the qualified electors of the State at the time and place of choosing members of the legislature. The person having the highest number of votes for governor shall be declared elected, but if two or more shall have an equal and highest number of votes for governor, the two houses of the legislature at its next regular session shall forthwith, by joint ballot, choose one of such persons for said office. The returns of the election for governor shall be made in such manner as shall be prescribed by law.

SEC. 4. The governor shall be commander-in-chief of the military forces of the State, except when they are called into the service of the United States, and may call out the same to execute the laws, suppress insurrection, and repel invasion. He shall have power to convene the legislature on extraordinary occasions. He shall at the commencement of each session communicate to the legislature by message informa-

tion of the condition of the State, and recommend such measures as he shall deem expedient. He shall transact all necessary business with the officers of the government, civil and military. He shall expedite all such measures as may be resolved upon by the legislature, and shall take care that the laws be faithfully executed.

SEC. 5. The governor shall have power to remit fines and forfeitures, to grant reprieves, commutations, and pardons after conviction, for all offenses except treason and cases of impeachment; but the legislature may by law regulate the manner in which the remission of fines, pardons, commutations, and reprieves may be applied for. Upon conviction for treason he shall have power to suspend the execution of sentence until the case is reported to the legislature at its next regular session, when the legislature shall either pardon or commute the sentence, direct the execution of the sentence, or grant further reprieve. He shall communicate to the legislature at each regular session each case of remission of fine, reprieve, commutation, or pardon granted by him, stating the name of the convict, the crime for which he was convicted, the sentence and its date, and the date of the remission, commutation, pardon, or reprieve, with his reasons for granting the same.

SEC. 6. If the governor be impeached, displaced, resign, or die, or from mental or physical disease or otherwise become incapable of performing the duties of his office, or be absent from the State, the secretary of state shall act as governor until the vacancy is filled or the disability removed.

SEC. 7. When any office from any cause becomes vacant, and no mode is provided by the constitution or law for filling such vacancy, the governor shall have power to fill the same by appointment.

SEC. 8. Every bill which has passed the legislature shall, before it becomes a law, be presented to the governor. If he approve, he shall sign; but if not, he shall return it with his objections to the house in which it originated, which shall enter the objections at large upon the journal and proceed to reconsider it. If, after such reconsideration, two-thirds of the members elected agree to pass the bill, it shall be sent, together with the objections, to the other house, by which it shall likewise be reconsidered, and if it be approved by two-thirds of the members elected it shall become a law; but in all such cases the vote of both houses shall be determined by the yeas and nays, and the names of the members voting for and against the bill shall be entered upon the journal of each house respectively. If any bill is not returned by the governor within three days (Sundays excepted) after its presentation to him, the same shall be a law, unless the legislature by its adjournment prevent its return, in which case it shall be a law unless he shall file the same with his objections in the office of the secretary of state within fifteen days after such adjournment.

SEC. 9. The governor shall have power to disapprove of any item or items or part or parts of any bill making appropriations of money or property embracing distinct items, and the part or parts of the bill approved shall be the law, and the item or items and part or parts disapproved shall be void unless enacted in the following manner: If the legislature be in session he shall transmit to the house in which the bill originated a copy of the item or items, or part or parts thereof disapproved, together with his objections thereto, and the items or parts objected to shall be separately reconsidered, and each item or part shall then take the same course as is prescribed for the passage of bills over the executive veto.

SEC. 10. Any governor of this State who asks, receives, or agrees to receive any bribe upon any understanding that his official opinion, judgment, or action shall be influenced thereby, or who gives, or offers, or promises his official influence in consideration that any member of the legislature shall give his official vote or influence on any particular side of any question or matter upon which he is required to act in his official capacity, or who menaces any member by the threatened use of his veto power, or who offers or promises any member that he, the governor, will appoint any particular person or persons to any office created or thereafter to be created, in consideration that any member shall give his official vote or influence on any matter pending or thereafter to be introduced into either house of said legislature; or who threatens any member that he, the governor, will remove any person or persons from office or position with intent in any manner to influence the action of said member, shall be punished in the manner now or that may hereafter be provided by law, and upon conviction thereof shall forfeit all right to hold or exercise any office of trust or honor in this State.

SEC. 11. There shall be chosen by the qualified electors of the State, at the times and places of choosing members of the legislature, a secretary of state, auditor, treasurer, and superintendent of public instruction, who shall have attained the age twenty-five years respectively, shall be citizens of the United States, and shall have the qualifications of State electors. They shall severally hold their offices at the seat of government for the term of four (4) years and until their successors are elected and duly qualified, but no person shall be eligible for the office of treasurer for four (4) years after the expiration of the term for which he was elected. The legislature may provide for such other State officers as are deemed necessary.

SEC. 12. The powers and duties of the secretary of state, of State auditor, treasurer, and superintendent of public instruction, shall be as prescribed by law.

SEC. 13. Until otherwise provided by law, the governor shall receive an annual salary of two thousand five hundred dollars; the secretary of state, State auditor, State treasurer, and superintendent of public instruction shall each receive an annual salary of two thousand dollars; and the salaries of any of the said officers shall not be increased or diminished during the period for which they were elected, and all fees and profits arising from any of the said offices shall be covered into the State treasury.

SEC. 14. The legislature shall provide for a State examiner, who shall be appointed by the governor and confirmed by the senate. His duty shall be to examine the accounts of State treasurer, supreme court clerks, district court clerks, and all county treasurers and treasurers of such other public institutions as the law may require, and shall perform such other duties as the legislature may prescribe. He shall report at least once a year, and oftener if required, to such officers as are designated by the legislature. His compensation shall be fixed by law.

SEC. 15. There shall be a seal of State, which shall be called the "Great seal of the State of Wyoming." It shall be kept by the secretary of state and used by him officially as directed by law.

SEC. 16. The seal of the Territory of Wyoming as now used shall be the seal of the State until otherwise provided by law.

ARTICLE V

JUDICIAL DEPARTMENT.

SECTION 1. The judicial power of the State shall be vested in the senate, sitting as a court of impeachment, in a supreme court, district courts, justices of the peace, courts of arbitration, and such courts as the legislature may by general law establish for incorporated cities or incorporated towns.

SEC. 2. The supreme court shall have general appellate jurisdiction, co-extensive with the State, in both civil and criminal causes and shall have a general superintending control over all inferior courts under such rules and regulations as may be prescribed by law.

SEC. 3. The supreme court shall have original jurisdiction in quo warranto and mandamus as to all State officers, and in habeas corpus. The supreme court shall also have power to issue writs of mandamus, review, prohibition, habeas corpus, certiorari, and other writs necessary and proper to the complete exercise of its appellate and revisory jurisdiction. Each of the judges shall have power to issue writs of habeas corpus to any part of the State upon petition by or on behalf of a person held in actual custody, and may make such writs returnable before himself or before the supreme court, or before any district court of the State or any judge thereof.

SEC. 4. The supreme court of the State shall consist of three justices, who shall be elected by the qualified electors of the State at a general State election at the times and places at which State officers are elected; and their term of office shall be eight (8) years commencing from and after the first Monday in January next succeeding their election; and the justices elected at the first election after this constitution shall go into effect shall, at their first meeting provided by law, so classify themselves by lot that one of them shall go out of office at the end of four (4) years and one at the end of six (6) years and one at the end of eight (8) years from the commencement of their term, and an entry of such classification shall be made in the record of the court and signed by them, and a duplicate thereof shall be filed in the office of the secretary of state. The justice having the shortest term to serve, and not holding his office by appointment or election to fill a vacancy, shall be the chief justice and shall preside at all terms of the supreme court, and in case of his absence the justice having in like manner the next shortest term to serve shall preside in his stead. If a vacancy occur in the office of a justice of the supreme court the governor shall appoint a person to hold the office until the election and qualification of a person to fill the unexpired term occasioned by such vacancy, which election shall take place at the next succeeding general election. The first election of the justices shall be at the first general election after this constitution shall go into effect.

SEC. 5. A majority of the justices of the supreme court shall be necessary to constitute a quorum for the transaction of business.

SEC. 6. In case a judge of the supreme court shall be in any way interested in a cause brought before such court the remaining judges of said court shall call one of the district judges to sit with them on the hearing of said cause.

SEC. 7. At least two terms of the supreme court shall be held annually at the seat of government at such times as may be provided by law.

SEC. 8. No person shall be eligible to the office of justice of the supreme court

unless he be learned in the law, has been in actual practice at least nine (9) years, or whose service on the bench of any court of record when added to the time he may have practiced law shall be equal to nine (9) years, be at least thirty years of age and a citizen of the United States, nor unless he shall have resided in this State or Territory at least three years.

SEC. 9. There shall be a clerk of the supreme court, who shall be appointed by the justices of said court and shall hold his office during their pleasure, and whose duties and emoluments shall be as provided by law.

SEC. 10. The district court shall have original jurisdiction of all causes both at law and in equity, and in all criminal cases, of all matters of probate and insolvency, and of such special cases and proceedings as are not otherwise provided for. The district court shall also have original jurisdiction in all cases and of all proceedings in which jurisdiction shall not have been by law vested exclusively in some other court; and said court shall have the power of naturalization and to issue papers there for. They shall have such appellate jurisdiction in cases arising in justices' and other inferior courts in their respective counties as may be prescribed by law. Said courts and their judges shall have power to issue writs of mandamus, quo warranto, review, certiorari, prohibition, injunction, and writs of habeas corpus, on petition by or on behalf of any person in actual custody in their respective districts.

SEC. 11. The judges of the district courts may hold courts for each other and shall do so when required by law.

SEC. 12. No person shall be eligible to the office of judge of the district court unless he be learned in the law, be at least twenty-eight years of age, and a citizen of the United States, nor unless he shall have resided in the State or Territory of Wyoming at least two years next preceeding his election.

SEC. 13. There shall be a clerk of the district court in each organized county in which a court is holden, who shall be elected, or, in case of vacancy, appointed in such manner and with such duties and compensation as may be prescribed by law.

SEC. 14. The legislature shall provide by law for the appointment by the several district courts of one or more district court commissioners (who shall be persons learned in the law) in each organized county in which a district court is holden; such commissioners shall have authority to perform such chamber business in the absence of the district judge from the county or upon his written statement filed with the papers, that it is improper for him to act, as may be prescribed by law, to take depositions and perform such other duties, and receive such compensation as shall be prescribed by law.

SEC. 15. The style of all process shall be "The State of Wyoming." All prosecutions shall be carried on in the name and by the authority of the State of Wyoming, and conclude "against the peace and dignity of the State of Wyoming."

SEC. 16. No duties shall be imposed by law upon the supreme court or any of the judges thereof, except such as are judicial, nor shall any of the judges thereof exercise any power of appointment except as herein provided.

SEC. 17. The judges of the supreme and district courts shall receive such compensation for their services as may be prescribed by law, which compensation shall not be increased or diminished during the term for which a judge shall have been elected, and the salary of a judge of the supreme or district court shall be as may be prescribed by law.

SEC. 18. Writs of error and appeals may be allowed from the decisions of the district courts to the supreme court, under such regulations as may be prescribed by law.

SEC. 19. Until otherwise provided by law, the State shall be divided into three judicial districts, in each of which there shall be elected at general elections, by the electors thereof, one judge of the district court therein, whose term shall be six (6) years from the first Monday in January succeeding his election and until his successor is duly qualified.

SEC. 20. Until otherwise provided by law, said judicial districts shall be constituted as follows:

District number one shall consist of the counties of Laramie, Converse, and Crook.

District number two shall consist of the counties of Albany, Johnson, and Sheridan.

District number three shall consist of the counties of Carbon, Sweetwater, Uinta, and Fremont.

SEC. 21. The legislature may from time to time increase the number of said judicial districts and judges thereof, but such increase or change in the boundaries of the districts shall not work the removal of any judge from his office during the term for which he may have been elected or appointed; provided the number of districts and district judges shall not exceed four until the taxable valuation of property in the State shall exceed one hundred million dollars (\$100,000,000).

SEC. 22. The legislature shall provide by law for the election of justices of the peace in each organized county within the State. But the number of said justices to be elected in each organized county shall be limited by law to such number as shall be

necessary for the proper administration of justice. The justices of the peace herein provided for shall have concurrent jurisdiction with the district court in all civil actions where the amount in controversy, exclusive of costs, does not exceed two hundred dollars, and they shall have such jurisdiction to hear and determine cases of misdemeanor as may be provided by law, but in no case shall said justices of the peace have jurisdiction when the boundaries of or title to real estate shall come into question.

SEC. 23. Appeals shall lie from the final decisions of justices of the peace and police magistrates in such cases and pursuant to such regulations as may be prescribed by law.

SEC. 24. The time of holding courts in the several counties of a district shall be as prescribed by law, and the legislature shall make provisions for attaching unorganized counties or territory to organized counties for judicial purposes.

SEC. 25. No judge of the supreme or district court shall act as attorney or counselor at law.

SEC. 26. Until the legislature shall provide by law for fixing the terms of courts, the judges of the supreme court and district courts shall fix the terms thereof.

SEC. 27. No judge of the supreme or district court shall be elected or appointed to any other than judicial offices or be eligible thereto during the term for which he was elected or appointed such judge.

SEC. 28. Appeals from decisions of compulsory boards of arbitration shall be allowed to the supreme court of the State, and the manner of taking such appeals shall be prescribed by law.

ARTICLE NO. VI.

SUFFRAGE.

SECTION 1. The rights of citizens of the State of Wyoming to vote and to hold office shall not be denied or abridged on account of sex. Both male and female citizens of this State shall equally enjoy all civil, political, and religious rights and privileges.

SEC. 2. Every citizen of the United States of the age of twenty-one years and upwards, who has resided in the State or Territory one year and in the county wherein such residence is located sixty days next preceding any election, shall be entitled to vote at such election, except as herein otherwise provided.

SEC. 3. Electors shall in all cases, except treason, felony, or breach of the peace, be privileged from arrest on the days of election during their attendance at elections, and going to and returning therefrom.

SEC. 4. No elector shall be obliged to perform militia duty on the day of election, except in time of war or public danger.

SEC. 5. No person shall be deemed a qualified elector of this State, unless such person be a citizen of the United States.

SEC. 6. All idiots, insane persons, and persons convicted of infamous crimes, unless restored to civil rights, are excluded from the elective franchise.

SEC. 7. No elector shall be deemed to have lost his residence in the State by reason of his absence on business of the United States, or of this State, or in the military or naval service of the United States.

SEC. 8. No soldier, seaman, or marine in the Army or Navy of the United States shall be deemed a resident of this State in consequence of his being stationed therein.

SEC. 9. No person shall have the right to vote who shall not be able to read the constitution of this State. The provisions of this section shall not apply to any person prevented by physical disability from complying with its requirements.

SEC. 10. Nothing herein contained shall be construed to deprive any person of the right to vote, who has such right at the time of the adoption of this constitution, unless disqualified by the restrictions of section six of this article. After the expiration of five (5) years from the time of the adoption of this constitution none but citizens of the United States shall have the right to vote.

SEC. 11. All elections shall be by ballot. The legislature shall provide by law that the names of all candidates for the same office to be voted for at any election shall be printed on the same ballot, at public expense, and on election day be delivered to the voters within the polling place by sworn public officials, and only such ballots so delivered shall be received and counted. But no voter shall be deprived of the privilege of writing upon the ballot used the name of any other candidate. All voters shall be guaranteed absolute privacy in the preparation of their ballots, and the secrecy of the ballot shall be made compulsory.

SEC. 12. No person qualified to be an elector of the State of Wyoming shall be allowed to vote at any general or special election hereafter to be holden in the State until he or she shall have registered as a voter according to law, unless the failure to register is caused by sickness or absence, for which provision shall be made by law.

The legislature of the State shall enact such laws as will carry into effect the provisions of this section, which enactment shall be subject to amendment, but shall never be repealed; but this section shall not apply to the first election held under this constitution.

Elections.

SEC. 13. The legislature shall pass laws to secure the purity of elections, and guard against abuses of the elective franchise.

SEC. 14. The legislature shall, by general law, designate the courts by which the several classes of election contests not otherwise provided for shall be tried, and regulate the manner of trial and all matters incident thereto; but no such law shall apply to any contest arising out of an election held before its passage.

SEC. 15. No person except a qualified elector shall be elected or appointed to any civil or military office in the State.

SEC. 16. Every person holding any civil office under the State or any municipality therein shall, unless removed according to law, exercise the duties of such office until his successor is duly qualified, but this shall not apply to members of the legislature, nor to members of any board of assembly, two or more of whom are elected at the same time. The legislature may by law provide for suspending any officer in his functions, pending impeachment or prosecution for misconduct in office.

Qualifications for office.

SEC. 17. All general elections for State and county officers, for members of the house of representatives and the senate of the State of Wyoming, and representatives to the Congress of the United States, shall be held on the Tuesday next following the first Monday in November of each even year. Special elections may be held as now, or as may hereafter be provided by law. All State and county officers elected at a general election shall enter upon their respective duties on the first Monday in January next following the date of their election, or as soon thereafter as may be possible.

SEC. 18. All officers, whose election is not provided for in this constitution, shall be elected or appointed as may be directed by law.

SEC. 19. No member of Congress from this State, nor any person holding or exercising any office or appointment of trust or profit under the United States, shall at the same time hold or exercise any office in this State to which a salary, fees, or perquisites shall be attached. The legislature may by law declare what offices are incompatible.

Oath of office.

SEC. 20. Senators and representatives and all judicial, State, and county officers shall, before entering upon the duties of their respective offices, take and subscribe the following oath or affirmation: "I do solemnly swear (or affirm) that I will support, obey, and defend the Constitution of the United States and the constitution of this State, and that I will discharge the duties of my office with fidelity; that I have not paid or contributed, or promised to pay or contribute, either directly or indirectly, any money or other valuable thing, to procure my nomination or election (or appointment), except for necessary and proper expenses expressly authorized by law; that I have not, knowingly, violated any election law of the State or procured it to be done by others in my behalf; that I will not knowingly receive, directly or indirectly, any money or other valuable thing for the performance or non-performance of any act or duty pertaining to my office, other than the compensation allowed by law."

SEC. 21. The foregoing oath shall be administered by some person authorized to administer oaths, and in the case of State officers and judges of the supreme court shall be filed in the office of the Secretary of State, and in the case of other judicial and county officers in the office of the clerk of the county in which the same is taken; any person refusing to take said oath or affirmation shall forfeit his office, and any person who shall be convicted of having sworn or affirmed falsely, or of having violated said oath or affirmation, shall be guilty of perjury, and be forever disqualified from holding any office of trust or profit within this State. The oath to members of the senate and house of representatives shall be administered by one of the judges of the supreme court or a justice of the peace, in the hall of the house to which the members shall be elected.

ARTICLE NO. VII.

EDUCATION.

SECTION 1. The legislature shall provide for the establishment and maintenance of a complete and uniform system of public instruction, embracing free elementary

schools of every needed kind and grade, a university with such technical and professional departments as the public good may require and the means of the State allow, and such other institutions as may be necessary.

SEC. 2. The following are declared to be perpetual funds for school purposes, of which the annual income only can be appropriated, to wit: Such per centum as has been or may hereafter be granted by Congress on the sale of lands in this State; all moneys arising from the sale or lease of sections number sixteen and thirty-six in each township in the State, and the lands selected or that may be selected in lieu thereof; the proceeds of all lands that have been or may hereafter be granted to this State, where by the terms and conditions of the grant the same are not to be otherwise appropriated; the net proceeds of lands and other property and effects that may come to the State by escheat or forfeiture, or from unclaimed dividends or distributive shares of the estates of deceased persons; all moneys, stocks, bonds, lands, and other property now belonging to the common school fund.

SEC. 3. To the sources of revenue above mentioned shall be added all other grants, gifts, and devises that have been or may hereafter be made to this State and not otherwise appropriated by the terms of the grant, gift, or devise.

SEC. 4. All moneys, stocks, bonds, lands, and other property belonging to a county school fund, except such moneys and property as may be provided by law for current use in aid of public schools, shall belong to and be securely invested and sacredly preserved in the several counties as a county public school fund, the income of which shall be appropriated exclusively to the use and support of free public schools in the several counties of the State.

SEC. 5. All fines and penalties under general laws of the State shall belong to the public school fund of the respective counties, and be paid over to the custodians of such funds for the current support of the public schools therein.

SEC. 6. All funds belonging to the State for public school purposes, the interest and income of which only are to be used, shall be deemed trust funds in the care of the State, which shall keep them for the exclusive benefit of the public schools, and shall make good any losses that may in any manner occur, so that the same shall remain forever inviolate and undiminished. None of such funds shall ever be invested or loaned except on the bonds issued by school districts, or registered county bonds of the State, or State securities of this State or of the United States.

SEC. 7. The income arising from the funds mentioned in the preceding section, together with all the rents of the unsold school lands and such other means as the legislature may provide, shall be exclusively applied to the support of free schools in every county in the State.

SEC. 8. Provision shall be made by general law for the equitable distribution of such income among the several counties according to the number of children of school age in each; which several counties shall in like manner distribute the proportion of said fund by them received respectively to the several school districts embraced therein. But no appropriation shall be made from said fund to any district for the year in which a school has not been maintained for at least three months, nor shall any portion of any public school fund ever be used to support or assist any private school, or any school, academy, seminary, college, or other institution of learning controlled by any church or sectarian organization or religious denomination whatsoever.

SEC. 9. The legislature shall make such further provision by taxation or otherwise, as with the income arising from the general school fund will create and maintain a thorough and efficient system of public schools, adequate to the proper instruction of all the youth of the State between the ages of six and twenty-one years, free of charge; and in view of such provision so made, the legislature shall require that every child of sufficient physical and mental ability shall attend a public school during the period between six and eighteen years for a time equivalent to three years, unless educated by other means.

SEC. 10. In none of the public schools so established and maintained shall distinction or discrimination be made on account of sex, race, or color.

SEC. 11. Neither the legislature nor the superintendent of public instruction shall have power to prescribe text books to be used in the public schools.

SEC. 12. No sectarian instruction, qualifications, or tests shall be imparted, exacted, applied or in any manner tolerated in the schools of any grade or character controlled by the State, nor shall attendance be required at any religious service therein, nor shall any sectarian tenets or doctrines be taught or favored in any public school or institution that may be established under this constitution.

SEC. 13. The governor, secretary of state, state treasurer, and superintendent of public instruction shall constitute the board of land commissioners, which, under direction of the legislature, as limited by this constitution, shall have the direction, control, leasing, and disposal of the lands of the State granted, or which may be hereafter granted, for the support and benefit of public schools, subject to the further limitations that the sale of all lands shall be at public auction, after such delay (not less than the time fixed by Congress), in portions at proper intervals of time, and at

such minimum prices (not less than the minimum fixed by Congress), as to realize the largest possible proceeds.

SEC. 14. The general supervision of the public schools shall be entrusted to the State superintendent of public instruction, whose powers and duties shall be prescribed by law.

The University.

SEC. 15. The establishment of the University of Wyoming is hereby confirmed, and said institution, with its several departments, is hereby declared to be the University of the State of Wyoming. All lands which have been heretofore granted, or which may be granted hereafter by Congress unto the university as such, or in aid of the instruction to be given in any of its departments, with all other grants, donations, or devises for said university, or for any of its departments, shall vest in said university, and be exclusively used for the purposes for which they were granted, donated, or devised. The said lands may be leased on terms approved by the land commissioners, but may not be sold on terms not approved by Congress.

SEC. 16. The university shall be equally open to students of both sexes, irrespective of race or color; and in order that the instruction furnished may be as nearly free as possible, any amount in addition to the income from its grants of lands and other sources above mentioned, necessary to its support and maintenance in a condition of full efficiency, shall be raised by taxation or otherwise, under provisions of the legislature.

SEC. 17. The legislature shall provide by law for the management of the university, its lands and other property by a board of trustees, consisting of not less than seven members, to be appointed by the governor by and with the advice and consent of the senate; and the president of the university, and superintendent of public instruction, as members ex-officio, as such having the right to speak, but not to vote. The duties and powers of the trustees shall be prescribed by law.

Charitable and penal institutions.

SEC. 18. Such charitable, reformatory, and penal institutions as the claims of humanity and the public good may require shall be established and supported by the State in such manner as the legislature may prescribe. They shall be under the general supervision of a State board of charities and reform, whose duties and powers shall be prescribed by law.

SEC. 19. The property of all charitable and penal institutions belonging to the Territory of Wyoming shall, upon the adoption of this constitution, become the property of the State, of Wyoming, and such of said institutions as are then in actual operation shall thereafter have the supervision of the board of charities and reform, as provided in the last preceding section of this article, under provisions of the legislature.

Public health and morals.

SEC. 20. As the health and morality of the people are essential to their well-being, and to the peace and permanence of the State, it shall be the duty of the legislature to protect and promote these vital interests by such measures for the encouragement of temperance and virtue, and such restrictions upon vice and immorality of every sort, as are deemed necessary to the public welfare.

Public buildings.

SEC. 21. All public buildings and other property belonging to the Territory shall, upon the adoption of this constitution, become the property of the State of Wyoming.

SEC. 22. The construction, care, and preservation of all public buildings of the State not under the control of the board or officers of public institutions by authority of law shall be intrusted to such officers or boards, and under such regulations as shall be prescribed by law.

SEC. 23. The legislature shall have no power to change or to locate the seat of government, the State university, insane asylum, or State penitentiary, but may, after the expiration of ten (10) years after the adoption of this constitution, provide by law for submitting the question of the permanent location thereof, respectively, to the qualified electors of the State, at some general election, and a majority of all votes upon said question cast at said election shall be necessary to determine the location thereof; but for said period of ten (10) years, and until the same are respectively and permanently located, as herein provided, the location of the seat of government and said institutions shall be as follows:

The seat of government shall be located at the city of Cheyenne, in the county of

Laramie. The State university shall be located at the city of Laramie, in the county of Albany. The insane asylum shall be located at the town of Evanston, in the county of Uinta. The penitentiary shall be located at the city of Rawlins, in the county of Carbon; but the legislature may provide by law that said penitentiary may be converted to other public uses. The legislature shall not locate any other public institutions except under general laws and by vote of the people.

ARTICLE No. VIII.

IRRIGATION AND WATER RIGHTS.

SECTION 1. The water of all natural streams, springs, lakes, or other collection of still water, within the boundaries of the State, are hereby declared to be the property of the State.

SEC. 2. There shall be constituted a board of control, to be composed of the State engineer and superintendents of the water divisions, which shall, under such regulations as may be prescribed by law, have the supervision of the waters of the State and of their appropriation, distribution, and diversion, and of the various officers connected therewith; its decisions to be subject to review by the courts of the State.

SEC. 3. Priority of appropriation for beneficial uses shall give the better right. No appropriation shall be denied except when such denial is demanded by the public interests.

SEC. 4. The legislature shall by law divide the State into four (4) water divisions and provide for the appointment of superintendents thereof.

SEC. 5. There shall be a State engineer, who shall be appointed by the governor of the State and confirmed by the senate; he shall hold his office for the term of six (6) years or until his successor shall have been appointed and shall have qualified. He shall be president of the board of control and shall have general supervision of the waters of the State and of the officers connected with its distribution. No person shall be appointed to this position who has not such theoretical knowledge and such practical experience and skill as shall fit him for the position.

ARTICLE IX.

MINES AND MINING.

SECTION 1. There shall be established and maintained the office of inspector of mines, the duties and salary of which shall be prescribed by law. When said office shall be established the governor shall, with the advice and consent of the senate, appoint thereto a person proven in the manner provided by law to be competent and practical, whose term of office shall be two years.

SEC. 2. The legislature shall provide by law for the proper development, ventilation, drainage, and operation of all mines in this State.

SEC. 3. No boy under the age of fourteen years, and no woman or girl of any age, shall be employed or permitted to be in or about any coal, iron, or other dangerous mines for the purpose of employment therein; provided, however, this provision shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at such mine or colliery.

SEC. 4. For any injury to person or property caused by willful failure to comply with provisions of this article or laws passed in pursuance hereof a right of action shall accrue to the party injured for the damages sustained thereby, and in all cases in this State whenever the death of a person shall be caused by wrongful act, neglect, or default, such as would, if death had not ensued, have entitled the party injured to maintain an action to recover damages in respect thereof, the person who, or the corporation which, would have been liable, if death had not ensued, shall be liable to an action for damages notwithstanding the death of the person injured, and the legislature shall provide by law at its first session for the manner in which the right of action in respect thereto shall be enforced.

SEC. 5. The legislature may provide that the science of mining and metallurgy be taught in one of the institutions of learning under the patronage of the State.

SEC. 6. There shall be a State geologist, who shall be appointed by the governor of the State, with the advice and consent of the senate. He shall hold his office for a term of six (6) years, or until his successor shall have been appointed and shall have qualified. His duties and compensation shall be prescribed by law. No person shall be appointed to this position unless he has such theoretical knowledge and such practical experience and skill as shall fit him for the position; said State geologist shall, ex-officio, perform the duties of inspector of mines until otherwise provided by law.

ARTICLE No. X.

CORPORATIONS.

SECTION 1. The legislature shall be provide for the organization of corporations by general law. All laws relating to corporations may be altered, amended, or repealed by the legislature at any time when necessary for the public good and general welfare, and all corporations doing business in this State may, as to such business, be regulated, limited, or restrained by law, not in conflict with the Constitution of the United States.

SEC. 2. All powers and franchises of corporations are derived from the people, and are granted by their agent, the government, for the public good and general welfare, and the right and duty of the State to control and regulate them for these purposes is hereby declared. The power, rights, and privileges of any and all corporations may be forfeited by willful neglect or abuse thereof. The police power of the State is supreme over all corporations as well as individuals.

SEC. 3. All existing charters, franchises, special or exclusive privileges, under which an actual and bona-fide organization shall not have taken place, for the purpose for which formed, and which shall not have been maintained in good faith to the time of the adoption of this constitution, shall thereafter have no validity.

SEC. 4. No law shall be enacted limiting the amount of damages to be recovered for causing the injury or death of any person. Any contract or agreement with any employé waiving any right to recover damages for causing the death or injury of any employé shall be void.

SEC. 5. No corporation organized under the laws of Wyoming Territory or any other jurisdiction than this State shall be permitted to transact business in this State until it shall have accepted the constitution of this State and filed such acceptance in accordance with the laws thereof.

SEC. 6. No corporation shall have power to engage in more than one general line or department of business, which line of business shall be distinctly specified in its charter of incorporation.

SEC. 7. All corporations engaged in the transportation of persons, property, mineral oils and mineral products, news or intelligence, including railroads, telegraphs, express companies, pipe lines, and telephones, are declared to be common carriers.

SEC. 8. There shall be no consolidation or combination of corporations of any kinds whatever to prevent competition, to control or influence productions or prices thereof, or in any other manner to interfere with the public good and general welfare.

SEC. 9. The right of eminent domain shall never be so abridged or construed as to prevent the legislature from taking the property and franchises of incorporated companies and subjecting them to the public use the same as the property of individuals.

SEC. 10. The legislature shall provide by suitable legislation for the organization of mutual and co-operative associations or corporations.

Railroads.

SECTION 1. Any railroad corporation or association organized for the purpose shall have the right to construct and operate a railroad between any points within this State, and to connect at the State line with railroads of other States. Every railroad shall have the right with its road to intersect, connect with, or cross any other railroad, and all railroads shall receive and transport each other's passengers, and tonnage and cars, loaded or empty, without delay or discrimination.

SEC. 2. Railroad and telegraph lines heretofore constructed or that may hereafter be constructed in this State are hereby declared public highways and common carriers, and as such must be made by law to extend the same equality and impartiality to all who use them, excepting employes and their families and ministers of the Gospel, whether individuals or corporations.

SEC. 3. Every railroad corporation or association operating a line of railroad within this State shall annually make a report to the auditor of State of its business within this State, in such form as the legislature may prescribe.

SEC. 4. Exercise of the power and right of eminent domain shall never be so construed or abridged as to prevent the taking by the legislature of property and franchises of incorporated companies and subjecting them to public use the same as property of individuals.

SEC. 5. Neither the State, nor any county, township, school district, or municipality shall loan or give its credit or make donations to or in aid of any railroad or telegraph line; provided, that this section shall not apply to obligations of any county, city, township, or school district contracted prior to the adoption of this constitution.

SEC. 6. No railroad or other transportation company or telegraph company in existence upon the adoption of this constitution shall derive the benefit of any future legislation without first filing in the office of the secretary of state an acceptance of the provisions of this constitution.

SEC. 7. Any association, corporation, or lessee of the franchises thereof, organized for the purpose, shall have the right to construct and maintain lines of telegraph within this State and to connect the same with other lines.

SEC. 8. No foreign railroad or telegraph line shall do any business within this State without having an agent or agents within each county through which such railroad or telegraph line shall be constructed upon whom process may be served.

SEC. 9. No railroad company shall construct or operate a railroad within 4 miles of any existing town or city without providing a suitable depot or stopping-place at the nearest practicable point for the convenience of said town or city, and stopping all trains doing local business at said stopping place. No railroad company shall deviate from the most direct practicable line in constructing a railroad, for the purpose of avoiding the provisions of this section.

ARTICLE No. XI.

BOUNDARIES.

SECTION. 1. The boundaries of the State of Wyoming shall be as follows: Commencing at the intersection of the twenty-seventh meridian of longitude west from Washington with the forty-fifth degree of north latitude, and running thence west to the thirty-fourth meridian of west longitude, thence south to the forty-first degree of north latitude, thence east to the twenty-seventh meridian of west longitude, and thence north to place of beginning.

ARTICLE No. XII.

COUNTY ORGANIZATION.

SECTION 1. The several counties in the Territory of Wyoming as they shall exist at the time of the admission of said Territory as a State, are hereby declared to be the counties of the State of Wyoming.

SEC. 2. The legislature shall provide by general law for organizing new counties, locating the county seats thereof temporarily, and changing county lines. But no new county shall be formed unless it shall contain within the limits thereof property of the valuation of \$2,000,000, as shown by last preceding tax returns, and not then unless the remaining portion of the old county or counties shall each contain property of at least \$3,000,000 of assessable valuation; and no new county shall be organized, nor shall any organized county be so reduced as to contain a population of less than 1,500 bona fide inhabitants, and in case any portion of an organized county or counties is stricken off to form a new county, the new county shall assume and be holden for an equitable proportion of the indebtedness of the county or counties so reduced. No county shall be divided unless a majority of the qualified electors of the Territory proposed to be cut off voting on the proposition shall vote in favor of the division.

SEC. 3. The legislature shall provide by general law for changing county seats in organized counties, but it shall have no power to remove the county seat of any organized county.

SEC. 4. The legislature shall provide by general law for a system of township organization and government, which may be adopted by any county whenever a majority of the citizens thereof voting at a general election shall so determine.

SEC. 5. The legislature shall provide by law for the election of such county officers as may be necessary.

ARTICLE No. XIII.

MUNICIPAL CORPORATIONS.

SECTION 1. The legislature shall provide by general laws for the organization and classification of municipal corporations. The number of such classes shall not exceed four, and the powers of each class shall be defined by general laws, so that no such corporation shall have any power or be subject to any restrictions other than all corporations of the same class. Cities and towns now existing under special charters or the general laws of the Territory may abandon such charter and reorganize under the general laws of the State.

SEC. 2. No municipal corporation shall be organized without the consent of the

majority of the electors residing within the district proposed to be so incorporated, such consent to be ascertained in the manner and under such regulations as may be prescribed by law.

SEC. 3. The legislature shall restrict the powers of such corporations to levy taxes and assessments, to borrow money, and contract debts, so as to prevent the abuse of such power, and no tax or assessment shall be levied or collected, or debts contracted by municipal corporations, except in pursuance of law for public purposes, specified by law.

SEC. 4. No street passenger railway, telegraph, telephone, or electric-light line shall be constructed within the limits of any municipal organization without the consent of its local authorities.

SEC. 5. Municipal corporations shall have the same right as individuals to acquire rights by prior appropriation and otherwise to the use of water for domestic and municipal purposes, and the legislature shall provide by law for the exercise, upon the part of incorporated cities, towns, and villages, of the right of eminent domain for the purpose of acquiring from prior appropriators, upon the payment of just compensation, such water as may be necessary for the well being thereof, and for domestic uses.

ARTICLE NO. XIV.

SALARIES.

SECTION 1. All State, city, county, town, and school officers (excepting justices of the peace and constables in precincts having less than 1,500 population, and excepting court commissioners, boards of arbitration, and notaries public) shall be paid fixed and definite salaries. The legislature shall, from time to time, fix the amount of such salaries as are not already fixed by this constitution, which shall in all cases be in proportion to the value of the services rendered and the duty performed.

SEC. 2. The legislature shall provide by law the fees which may be demanded by justices of the peace and constables in precincts having less than 1,500 population, and of court commissioners, boards of arbitration, and notaries public, which fees the said officers shall accept as their full compensation. But all other State, county, city, town, and school officers shall be required to keep a true and correct account of all fees collected by them, and to pay the same into the proper treasury when collected, and the officer whose duty it is to collect such fees shall be held responsible under his bond for neglect to collect the same; provided, that in addition to the salary of the sheriff they shall be entitled to receive from the party for whom the services are rendered in civil cases such fees as may be prescribed under the law.

SEC. 3. The salaries of county officers shall be fixed by law within the following limits, to wit: In counties having an assessed valuation not exceeding \$2,000,000, the sheriff shall be paid not more than \$1,500 per year. The county clerk shall not be paid more than \$1,200 per year. The county and prosecuting attorney shall not be paid more than \$1,200 per year. The county treasurer shall not be paid more than \$1,000 per year. The county superintendent of schools shall not be paid more than \$500 per year.

In counties having an assessed valuation of more than \$2,000,000 and not exceeding \$5,000,000, the sheriff shall not be paid more than \$2,000 per year. The county clerk shall not be paid more than \$1,800 per year. The county treasurer shall not be paid more than \$1,800 per year. The county assessor shall not be paid more than \$1,200 per year. The county and prosecuting attorney shall not be paid more than \$1,500 per year. The county superintendent of schools shall not be paid more than \$750 per year.

In counties having more than \$5,000,000 assessed valuation, the sheriff shall not be paid more than \$2,000 per year. The county clerk shall not be paid more than \$2,000 per year. The county treasurer shall not be paid more than \$2,000 per year. The county assessor shall not be paid more than \$1,500 per year. The county and prosecuting attorney shall not be paid more than \$2,500 per year. The county superintendent of schools shall not be paid more than \$1,000 per year. The county surveyor in each county shall receive not to exceed \$8 per day, for each day actually engaged in the performance of the duties of his office.

SEC. 4. The legislature shall provide by general law for such deputies as the public necessities may require, and shall fix their compensation.

SEC. 5. Any county officers performing the duties usually performed by the officers named in this article shall be considered as referred to by section 3 of this article, regardless of the title by which their offices may hereafter be designated.

SEC. 6. Whenever practicable the legislature may, and whenever the same can be done without detriment to the public service shall, consolidate offices in State, county, and municipalities, respectively, and whenever so consolidated the duties of such additional office shall be performed under an *ex officio* title.

ARTICLE XV.

TAXATION AND REVENUE.

SECTION 1. All lands and improvements thereon shall be listed for assessment, valued for taxation, and assessed separately.

SEC. 2. All coal lands in the State from which coal is not being mined shall be listed for assessment, valued for taxation, and assessed according to value.

SEC. 3. All mines and mining claims from which gold, silver, and other precious metals, soda, saline, coal, mineral oil, or other valuable deposit is or may be produced shall be taxed in addition to the surface improvements, and in lieu of taxes on the lands, on the gross product thereof, as may be prescribed by law; provided, that the product of all mines shall be taxed in proportion to the value thereof.

SEC. 4. For State revenue there shall be levied annually a tax not to exceed four mills on the dollar of the assessed valuation of the property in the State except for the support of State educational and charitable institutions, the payment of the State debt and the interest thereon.

SEC. 5. For county revenue there shall be levied annually a tax not to exceed twelve mills on the dollar for all purposes, including general school tax, exclusive of State revenue, except for the payment of its public debt and the interest thereon. An additional tax of two dollars for each person between the ages of twenty-one years and fifty years, inclusive, shall be annually levied for county school purposes.

NO. 6. No incorporated city or town shall levy a tax to exceed eight mills on the dollar in any one year, except for the payment of its public debt and the interest thereon.

SEC. 7. All money belonging to the State, or to any county, city, town, village, or other subdivision therein, except as herein otherwise provided, shall, whenever practicable, be deposited in a national bank or banks, or in a bank or banks incorporated under the laws of this State; provided, that the bank or banks in which such money is deposited shall furnish security to be approved as provided by law, and shall also pay a reasonable rate of interest thereon. Such interest shall accrue to the fund from which it is derived.

SEC. 8. The making of profit, directly or indirectly, out of State, county, city, town, or school-district money or other public fund, or using the same for any purpose not authorized by law, by any public officer, shall be deemed a felony, and shall be punished as provided by law.

SEC. 9. There shall be a State board, composed of the State auditor, treasurer, and secretary of state.

SEC. 10. The duties of the State board shall be as follows: To fix a valuation each year for the assessment of live stock, and to notify the several county boards of equalization of the rate so fixed at least ten (10) days before the day fixed for beginning assessments; to assess at their actual value the franchises, roadway, road-bed, rails, and rolling stock, and all other property used in the operation of all railroads and other common carriers, except machine shops, rolling-mills, and hotels in this State; such assessed valuation shall be apportioned to the counties in which said roads and common carriers are located, as a basis for taxation of such property; provided, that the assessment so made shall not apply to incorporated towns and cities. Said board shall also have power to equalize the valuation on all property in the several counties for the State revenue and such other duties as may be prescribed by law.

SEC. 11. All property, except as in this constitution otherwise provided, shall be uniformly assessed for taxation, and the legislature shall prescribe such regulations as shall secure a just valuation of all property, real and personal.

SEC. 12. The property of the United States, the State, counties, cities, towns, school districts, municipal corporations and public libraries, lots with the buildings thereon used exclusively for religious worship, church parsonages, public cemeteries, shall be exempt from taxation, and such other property as the legislature may by general law provide.

SEC. 13. No tax shall be levied, except in pursuance of law, and every law imposing a tax shall state distinctly the object of the same, to which only it shall be applied.

SEC. 14. The power of taxation shall never be surrendered or suspended by any grant or contract to which the State or any county or other municipal corporation shall be a party.

ARTICLE NO. XVI.

PUBLIC INDEBTEDNESS.

SECTION 1. The State of Wyoming shall not, in any manner, create any indebtedness exceeding one per centum on the assessed value of the taxable property in the

State, as shown by the last general assessment for taxation, preceding; except to suppress insurrection or to provide for the public defense.

SEC. 2. No debt in excess of the taxes for the current year shall in any manner be created in the State of Wyoming, unless the proposition to create such debt shall have been submitted to a vote of the people and by them approved; except to suppress insurrection or to provide for the public defense.

SEC. 3. No county in the State of Wyoming shall in any manner create any indebtedness, excepting two per centum on the assessed value of taxable property in such county, as shown by the last general assessment, preceding; provided, however, that any county, city, town, village, or other subdivision thereof in the State of Wyoming, may bond its public debt existing at the time of the adoption of this constitution, in any sum not exceeding four per centum on the assessed value of the taxable property in such county, city, town, village, or other subdivision, as shown by the last general assessment for taxation.

SEC. 4. No debt in excess of the taxes for the current year shall, in any manner, be created by any county or subdivision thereof, or any city, town, or village, or any subdivision thereof in the State of Wyoming, unless the proposition to create such debt shall have been submitted to a vote of the people thereof and by them approved.

SEC. 5. No city, town, or village, or any subdivision thereof, or any subdivision of any county of the State of Wyoming, shall, in any manner, create any indebtedness exceeding two per centum the assessed value of the taxable property therein; provided, however, that any city, town, or village may be authorized to create an additional indebtedness, not exceeding four per centum on the assessed value of the taxable property therein as shown by the last preceding general assessment, for purpose of building sewerage therein; debts contracted for supplying water to such city or town are excepted from the operation of this section.

SEC. 6. Neither the State nor any county, city, township, town, school district, or any other political subdivision, shall loan or give its credit or make donations to or in aid of any individual, association, or corporation, except for the necessary support of the poor, nor subscribe to or become the owner of the capital stock of any association or corporation. The State shall not engage in any work of internal improvement unless authorized by a two-thirds vote of the people.

SEC. 7. No money shall be paid out of the State treasury except upon appropriation by law and on warrant drawn by the proper officer, and no bills, claims, accounts, or demands against a State, county, or political subdivision, shall be audited, allowed, or paid until a full itemized statement, in writing, verified by affidavit, shall be filed with the officer or officers whose duty it may be to audit the same.

SEC. 8. No bond or evidence of indebtedness of the State shall be valid unless the same shall have endorsed thereon a certificate signed by the auditor and secretary of state that the bond or evidence of debt is issued pursuant to law and is within the debt limit. No bond or evidence of debt of any county, or bond of any township or other political subdivision shall be valid unless the same have endorsed thereon a certificate signed by the county auditor or other officer authorized by law to sign such certificate, stating that said bond or evidence of debt is issued pursuant to law and is within the debt limit.

ARTICLE XVII.

STATE MILITIA.

SECTION 1. The militia of the State shall consist of all able-bodied male citizens of the State, between the ages of eighteen and forty-five years; except such as are exempted by the laws of the United States or of the State. But all such citizens having scruples of conscience averse to bearing arms shall be excused therefrom upon such conditions as shall be prescribed by law.

SEC. 2. The legislature shall provide by law for the enrollment, equipment, and discipline of the militia to conform as nearly as practicable to the regulations for the government of the armies of the United States.

SEC. 3. All militia officers shall be commissioned by the governor, the manner of their selection to be provided by law, and may hold their commissions for such period of time as the legislature may provide.

SEC. 4. No military organization under the laws of the State shall carry any banner or flag representing any sect or society or the flag of any nationality but that of the United States.

SEC. 5. The governor shall be the commander-in-chief of all the militia forces of the State, and shall have power to call out the militia to preserve the public peace, to execute the laws of the State, to suppress insurrection, or repel invasion.

ARTICLE XVIII.

PUBLIC LANDS AND DONATIONS.

SECTION 1. The State of Wyoming hereby agrees to accept the grants of lands heretofore made, or that may hereafter be made, by the United States to the State for educational purposes, for public buildings and institutions, and for other objects, and donations of money, with the conditions and limitations that may be imposed by the act or acts of Congress making such grants or donations. Such lands shall be disposed of only at public auction to the highest responsible bidder, after having been duly appraised by the land commissioners, at not less than three-fourths of the appraised value thereof, and for not less than \$10 per acre; provided, that in case of actual and bona-fide settlement and improvement thereon at the time of the adoption of this constitution, such actual settler shall have the preference right to purchase the land whereon he may have settled, not exceeding 160 acres, at a sum not less than the appraised value thereof, and in making such appraisement the value of improvements shall not be taken into consideration. If, at any time hereafter, the United States shall grant any arid lands in the State to the State, on condition that the State reclaim and dispose of them to actual settlers, the legislature shall be authorized to accept such arid lands on such conditions, or other conditions, if the same are practicable and reasonable.

SEC. 2. The proceeds from the sale and rental of all lands and other property donated, granted, or received, or that may hereafter be donated, granted, or received, from the United States or any other source, shall be inviolably appropriated and applied to the specific purposes specified in the original grant or gifts.

SEC. 3. The governor, superintendent of public instruction, and secretary of State shall constitute a board of land commissioners, who, under such regulations as may be provided by law, shall have the direction, control, disposition, and care of all lands that have been heretofore or may hereafter be granted to the State.

SEC. 4. The legislature shall enact the necessary laws for the sale, disposal, leasing, or care of all lands that have been or may hereafter be granted to the State, and shall, at the earliest practicable period, provide by law for the location and selection of all lands that have been or may hereafter be granted by Congress to the State, and shall pass laws for the suitable keeping, transfer, and disbursement of the land grant funds, and shall require of all officers charged with the same or the safe keeping thereof to give ample bonds for all moneys and funds received by them.

SEC. 5. Except a preference right to buy as in this constitution otherwise provided, no law shall ever be passed by the legislature granting any privileges to persons who may have settled upon any of the school lands granted to the State subsequent to the survey thereof by the General Government, by which the amount to be derived by the sale, or other disposition of such lands, shall be diminished directly or indirectly.

SEC. 6. If any portion of the interest or income of the perpetual school fund be not expended during any year, said portion shall be added to and become a part of the said school fund.

ARTICLE No. XIX.

MISCELLANEOUS.

Live stock.

SECTION 1. The legislature shall pass all necessary laws to provide for the protection of live stock against the introduction or the spread of pleuro-pneumonia, glanders, splenic or Texas fever, and other infectious or contagious diseases. The legislature shall also establish a system of quarantine, or inspection, and such other regulations as may be necessary for the protection of stock owners, and most conducive to the stock interests within this State.

Concerning labor.

SEC. 1. Eight (8) hours' actual work shall constitute a lawful day's work in all mines and on all State and municipal works.

Labor on public works.

SEC. 1. No person not a citizen of the United States, or who has not declared his intentions to become such, shall be employed upon or in connection with any State, county, or municipal works or employment.

SEC. 2. The legislature shall by appropriate legislation see that the provisions of the foregoing section are enforced.

Boards of arbitration.

SEC. 1. The legislature shall establish courts of arbitration, whose duty it shall be to hear and determine all differences and controversies between organizations or

associations of laborers and their employers, which shall be submitted to them in such manner as the legislature may provide.

Police powers.

SEC. 1. No armed police force, or detective agency, or armed body, or unarmed body of men, shall ever be brought into this State, for the suppression of domestic violence, except upon the application of the legislature, or executive when the legislature can not be convened.

Labor contracts.

SEC. 1. It shall be unlawful for any person, company, or corporation, to require of its servants or employes as a condition of their employment, or otherwise, any contract or agreement, whereby such person, company, or corporation shall be released or discharged from liability or responsibility on account of personal injuries received by such servants or employes while in service of such person, company, or corporation, by reason of the negligence of such person, company, or corporation, or the agents or employes thereof, and such contracts shall be absolutely null and void.

Arbitration.

SEC. 1. The legislature may provide by law for the voluntary submission of differences to arbitrators for determination, and said arbitrators shall have such powers and duties as may be prescribed by law, but they shall have no power to render judgment to be obligatory on parties, unless they voluntarily submit their matters of difference and agree to abide the judgment of such arbitrators.

Homesteads.

SEC. 1. A homestead as provided by law shall be exempt from forced sale under any process of law, and shall not be alienated without the joint consent of husband and wife, when that relation exists, but no property shall be exempt from sale for taxes, or for the payment of obligations contracted for the purchase of said premises, or for the erection of improvements thereon.

ARTICLE No. XX.

AMENDMENTS.

SECTION 1. Any amendment or amendments to this constitution may be proposed in either branch of the legislature, and, if the same shall be agreed to by two-thirds of all the members of each of the two houses, voting separately, such proposed amendment or amendments shall, with the yeas and nays thereon, be entered on their journals, and it shall be the duty of the legislature to submit such amendment or amendments to the electors of the State at the next general election, and cause the same to be published without delay for at least twelve (12) consecutive weeks, prior to said election, in at least one newspaper of general circulation, published in each county, and if a majority of the electors shall ratify the same, such amendment or amendments shall become a part of this constitution.

SEC. 2. If two or more amendments are proposed, they shall be submitted in such manner that the electors shall vote for or against each of them separately.

SEC. 3. Whenever two-thirds of the members elected to each branch of the legislature shall deem it necessary to call a convention to revise or amend this constitution, they shall recommend to the electors to vote at the next general election, for or against a convention, and if a majority of all the electors voting at such election shall have voted for a convention, the legislature shall at the next session provide by law for calling the same; and such convention shall consist of a number of members not less than double that of the most numerous branch of the legislature.

SEC. 4. Any constitution adopted by such convention shall have no validity until it has been submitted to and adopted by the people.

ARTICLE No. XXI.

SCHEDULE.

SECTION 1. That no inconvenience may arise from a change of the Territorial government to a permanent State government, it is declared that all writs, actions, prosecutions, claims, liabilities, and obligations against the Territory of Wyoming, of whatever nature, and rights of individuals, and of bodies corporate, shall continue as if no change had taken place in this government, and all process which may, before the organization of the judicial department under this constitution, be issued

under the authority of the Territory of Wyoming, shall be as valid as if issued in the name of the State.

SEC. 2. All property, real and personal, and all moneys, credits, claims, and choses in action, belonging to the Territory of Wyoming at the time of the adoption of this constitution, shall be vested in and become the property of the State of Wyoming.

SEC. 3. All laws now in force in the Territory of Wyoming, which are not repugnant to this constitution, shall remain in force until they expire by their own limitation, or be altered or repealed by the legislature.

SEC. 4. All fines, penalties, forfeitures, and escheats accruing to the Territory of Wyoming shall accrue to the use of the State.

SEC. 5. All recognizances, bonds, obligations, or other undertakings heretofore taken, or which may be taken before the organization of the judicial department under this constitution, shall remain valid, and shall pass over to and may be prosecuted in the name of the State, and all bonds, obligations, or other undertakings executed to this Territory, or to any officer in his official capacity, shall pass over to the proper State authority and to their successors in office, for the uses therein respectively expressed, and may be sued for and recovered accordingly. All criminal prosecutions and penal actions which have arisen or which may arise before the organization of the judicial department under this constitution, and which shall then be pending, may be prosecuted to judgment and execution in the name of the State.

SEC. 6. All officers, civil and military, holding their offices and appointments in this Territory, under the authority of the United States or under the authority of this Territory, shall continue to hold and exercise their respective offices and appointments until suspended under this constitution.

SEC. 7. This constitution shall be submitted for adoption or rejection to a vote of the qualified electors of this Territory, at an election to be held on the first Tuesday in November, A. D. 1889. Said election, as nearly as may be, shall be conducted in all respects in the same manner as provided by the laws of the Territory for general elections, and the returns thereof shall be made to the secretary of said Territory, who, with the governor and chief-justice thereof, or any two of them, shall canvass the same, and if a majority of the legal votes cast shall be for the constitution the governor shall certify the result to the President of the United States, together with a statement of the votes cast thereon and a copy of said constitution, articles, propositions, and ordinances. At the said election the ballots shall be in the following form: "For the Constitution—Yes. No." And as a heading to each of said ballots, shall be printed on each ballot the following instructions to voters: "All persons who desire to vote for the constitution may erase the word 'No.' All persons who desire to vote against the constitution may erase the word 'Yes.'" Any person may have printed or written on his ballot only the words: "For the Constitution" or "Against the Constitution," and such ballots shall be counted for or against the constitution accordingly.

SEC. 8. This constitution shall take effect and be in full force immediately upon the admission of the Territory as a State.

SEC. 9. Immediately upon the admission of the Territory as a State, the governor of the Territory, or in case of his absence or failure to act, the secretary of the Territory, or in the case of his absence or failure to act, the president of this convention shall issue a proclamation, which shall be published and a copy thereof mailed to the chairman of the board of county commissioners of each county, calling an election by the people for all State, district, and other officers, created and made elective by this constitution, and fixing a day for such election, which shall not be less than forty days after the date of such proclamation nor more than ninety days after the admission of the Territory as a State.

SEC. 10. The board of commissioners of the several counties shall thereupon order such election for said day, and shall cause notice thereof to be given, in the manner and for the length of time provided by the laws of the Territory in cases of general elections for Delegate to Congress, and county and other offices. Every qualified elector of the Territory at the date of said election shall be entitled to vote thereat. Said election shall be conducted in all respects in the same manner as provided by the laws of the Territory for general elections, and the returns thereof shall be made to the canvassing board hereinafter provided for.

SEC. 11. The governor, secretary of the Territory, and president of this convention, or a majority of them, shall constitute a board of canvassers to canvass the vote of such election for member of Congress, all State and district officers, and members of the legislature. The said board shall assemble at the seat of government of the Territory on the thirtieth day after the day of such election (or on the following day if such day fall on Sunday) and proceed to canvass the votes for all State and district officers and members of the legislature, in the manner provided by the laws of the Territory for canvassing the vote for Delegate to Congress, and they shall issue certificates of election to the persons found to be elected to said offices, severally, and shall make and file with the secretary of the Territory an abstract, certified by them,

of the number of votes cast for each person for each of said offices, and of the total number of votes cast in each county.

SEC. 12. All officers elected at such election, except members of the legislature, shall within thirty days after they have been declared elected, take the oath required by this constitution, and give the same bond required by the law of the Territory to be given in case of like officers of the Territory or district, and shall thereupon enter upon the duties of their respective offices; but the legislature may require by law all such officers to give other or further bonds as a condition of their continuance in office.

SEC. 13. The governor-elect of the State, immediately upon his qualifying and entering upon the duties of his office, shall issue his proclamation convening the legislature of the State at the seat of government on a day to be named in said proclamation, and which shall not be less than thirty nor more than sixty days after the date of said proclamation. Within ten days after the organization of the legislature, both houses of the legislature, in joint session, shall then and there proceed to elect, as provided by law, two Senators of the United States for the State of Wyoming. At said election the two persons who shall receive the majority of all the votes cast by said senators and representatives shall be elected as such United States Senators, and shall be so declared by the presiding officers of said joint session. The presiding officers of the senate and house shall issue a certificate to each of said Senators certifying his election, which certificates shall also be signed by the governor and attested by the secretary of state.

SEC. 14. The legislature shall pass all necessary laws to carry into effect the provisions of this constitution.

SEC. 15. Whenever any two of the judges of the supreme court of the State, elected under the provisions of this constitution, shall have qualified in their offices the causes then pending in the supreme court of the Territory, and the papers, records, and proceedings of said court, and the seal and other property pertaining thereto, shall pass into the jurisdiction and possession of the supreme court of the State; and until so superceded the supreme court of the Territory and the judges thereof shall continue with like powers and jurisdiction, as if this constitution had not been adopted. Whenever the judge of the district court of any district, elected under the provisions of this constitution, shall have qualified in office, the several causes then pending in the district court of the Territory, within any county in such district, and the records, papers, and proceedings of said district court and the seal and other property pertaining thereto, shall pass into the jurisdiction and possession of the district court of the State for such county; and until the district courts of this Territory shall be superceded in the manner aforesaid, the said district courts and the judges thereof shall continue with the same jurisdiction and power to be exercised in the same judicial districts respectively as heretofore constituted under the laws of the Territory.

SEC. 16. Until otherwise provided by law, the seals now in use in the supreme and district courts of this Territory are hereby declared to be the seals of the supreme and district courts, respectively, of the State.

SEC. 17. Whenever this constitution shall go into effect, records and papers and proceedings of the probate court in each county, and all causes and matters of administration and other matters pending therein, shall pass into the jurisdiction and possession of the district court of the same county, and the said district court shall proceed to final decree or judgment, order, or other determination in the said several matters and causes, as the said probate court might have done if this constitution had not been adopted.

SEC. 18. Senators and members of the house of representatives shall be chosen by the qualified electors of the several senatorial and representative districts, as established in this constitution, until such districts shall be changed by law, and thereafter by the qualified electors of the several districts, as the same shall be established by law.

SEC. 19. All county and precinct officers who may be in office at the time of the adoption of this constitution shall hold their respective offices for the full time for which they may have been elected, and until such time as their successors may be elected and qualified, as may be provided by law, and the official bonds of all such officers shall continue in full force and effect, as though this constitution had not been adopted.

SEC. 20. Members of the legislature and all State officers, district and supreme judges elected at the first election held under this constitution, shall hold their respective offices for the full term next ensuing such election, in addition to the period intervening between the date of their qualification and the commencement of such full term.

SEC. 21. If the first session of the legislature under this constitution shall be concluded within twelve months of the time designated for a regular session thereof, then the next regular session following said special session shall be omitted.

SEC. 22. The first regular election that would otherwise occur following the first session of the legislature, shall be omitted, and all county and precinct officers elected at the first election held under this constitution shall hold their office for the full term thereof commencing at the expiration of the term of the county and precinct officers then in office, or the date of their qualification.

SEC. 23. This convention does hereby declare, on behalf of the people of the Territory of Wyoming, that this constitution has been prepared and submitted to the people of the Territory of Wyoming for their adoption or rejection, with no purpose of setting up or organizing a State government until such time as the Congress of the United States shall enact a law for the admission of the Territory of Wyoming as a State under its provisions.

ORDINANCES.

The following article shall be irrevocable without the consent of the United States and the people of this State :

SECTION 1. The State of Wyoming is an inseparable part of the Federal Union and the Constitution of the United States is the supreme law of the land.

SEC. 2. Perfect toleration of religious sentiment shall be secured, and no inhabitant of this State shall ever be molested in person or property on account of his or her mode of religious worship.

SEC. 3. The people inhabiting this State do agree and declare that they forever disclaim all right and title to the unappropriated public lands lying within the boundaries thereof, and to all lands lying within said limits owned or held by any Indian or Indian tribes, and that until the title thereto shall have been extinguished by the United States, the same shall be and remain subject to the disposition of the United States, and that said Indian lands shall remain under the absolute jurisdiction and control of the Congress of the United States ; that the lands belonging to citizens of the United States residing without this State shall never be taxed at a higher rate than the lands belonging to residents of this State; that no taxes shall be imposed by this State on lands or property therein, belonging to, or which may hereafter be purchased by the United States, or reserved for its use. But nothing in this article shall preclude this State from taxing, as other lands are taxed, any lands owned or held by any Indian who has severed his tribal relations, and has obtained from the United States or from any person, a title thereto, by patent or other grant, save and except such lands as have been or may be granted to any Indian or Indians under any acts of Congress containing a provision exempting the lands thus granted from taxation, which last-mentioned lands shall be exempt from taxation so long, and to such an extent, as is or may be provided in the act of Congress granting the same.

SEC. 4. All debts and liabilities of the Territory of Wyoming shall be assumed and paid by this State.

SEC. 5. The legislature shall make laws for the establishment and maintenance of systems of public schools, which shall be open to all the children of the State and free from sectarian control.

Done in open convention at the city of Cheyenne, in the Territory of Wyoming, this 30th day of September, in the year of our Lord one thousand eight hundred and eighty-nine.

Attest :

JOHN K. JEFFREY,
Secretary.

MELVILLE C. BROWN, *President.*
JOHN K. JEFFREY, *Secretary.*
ASHBURY B. CONAWAY.
A. C. CAMPBELL.
J. A. CASEBEER.
C. D. CLARK.
HENRY A. COFFEEN.
W. E. CHAPLIN.
JONATHAN JONES.
JOHN L. RUSSELL.
GEO. W. FOX.
FRANK M. FOOTE.
CHAS. H. BURRITT.
HENRY S. ELLIOTT.
MORTIMER N. GRANT.
HENRY G. HAY.
FREDERICK H. HARVEY
MARK HOPKINS.
JOHN W. HOYT.
WM. C. IRVINE.

JAMES A. JOHNSTON.
JESSE KNIGHT.
ELLIOTT S. N. MORGAN.
EDWARD J. MORRIS.
JOHN M. McCANDLISH.
HERMAN F. MENOUGH.
CALEB P. ORGAN.
LOUIS J. PALMER.
CHAS. N. POTTER.
D. A. PRESTON.
JOHN A. RINER.
GEO. C. SMITH.
H. E. TESCHEMACHER.
C. L. VAGNER.
GEO. W. BAXTER.
THOS. R. REID.
ROBT. C. BUTLER.
C. W. HOLDEN.
H. G. NICKERSON.
A. L. SUTHERLAND.

PROCLAMATION BY THE GOVERNOR.

Whereas the Constitutional Convention of Wyoming did, on the 30th day of September, 1889, adopt the following resolution:

"Resolved, That the governor of this Territory be requested to issue the executive proclamation calling a special election for the adoption or rejection of the constitution adopted by this convention, to occur at the time in said constitution mentioned."

Now, therefore, I, Francis E. Warren, governor of the Territory of Wyoming, do issue this, my proclamation, and direct that an election be held throughout the Territory on Tuesday, the fifth day of November, 1889, for the adoption or rejection, by the people, of the constitution proposed by said convention for the State of Wyoming. The said election shall be conducted, the returns thereof made and canvassed, and other proceedings had, as provided in said constitution.

In testimony whereof I have hereunto set my hand and caused the great seal of the Territory to be hereto affixed.

Done at the city of Cheyenne, this fourth day of October, eighteen hundred and eighty-nine.

[SEAL.]

FRANCIS E. WARREN.

By the Governor:

JOHN W. MELDRUM,
Secretary of Territory.

AN ADDRESS TO THE PEOPLE.

The convention convened at Cheyenne on September 2, 1889, to frame a constitution for the State of Wyoming, has completed its labors.

The constitution so framed will be submitted to you for adoption or rejection on November 5, 1889.

The convention designated the undersigned as a committee to lay before the people of the Territory reasons why the foregoing constitution should be adopted.

Our space is limited, and in this address we can only call your attention to a few of the many good reasons that exist.

Every county in the Territory was represented in the convention. A month's time of careful, conscientious, and painstaking labor has been spent in formulating this constitution. In all our deliberations we have endeavored to embody in our fundamental law such economic measures as we believed would commend our work to the people of the whole Territory, without reference to partisan politics, and with equal protection for the rich and poor.

TERRITORIAL GOVERNMENT.

For twenty years and more Wyoming has been laboring under the disadvantages of a Territorial form of government. These disadvantages are numerous. We have no voice in the selection of the most important officers who administer our local affairs; no voice in the enactment of laws by Congress, to which we must yield obedience, and no voice in the election of the Chief Magistrate of the Republic, who appoints the principal officers by whom the executive and judicial affairs of our Territory are administered. It has been well said: "A Territory can not have a settled public policy. The fact that Congress may at any time annul its legislation on any matter of purely local concern prevents active co-operation by the people on those higher planes of public life which result in the establishment of a permanent State policy." The abuse of the veto power by alien governors, the lack of familiarity of alien judges with our laws, and the frequent changes of our executive and judicial officers, as it has been in the past and may be again in the future, can not but discourage the people. Although citizens of the United States in name, we have, in fact, been disfranchised. Territorial representation in Congress is a delusion—the Territories of these United States have no representation. Taxation without representation, a condition in many respects allied to colonial vassalage, with the many other wrongs that follow the application of those two anti-American ideas, and with which you are familiar, have all united to render the condition of the people of Wyoming—the most energetic, intelligent, and patriotic citizens of the United States—well nigh intolerable.

We have endured all those things up to the present time without a murmur of discontent because we have not heretofore seen our way clear to throw off those chains of political and industrial bondage, and to ask, with hope of success, our ad-

mission into the Federal Union, where we could enjoy equally with sister States the right of local self-government and those other natural and inalienable rights guaranteed in the Constitution to every man. The residents of Wyoming are the descendants of free citizens, such as framed the Constitution of the United States. The loyalty of the sons to republican institutions and their love of liberty have not been decreased but increased by the hardships and dangers that have been endured and by the difficulties that have been encountered and overcome in laying the foundation. It is admitted that Wyoming Territory stands next in order in its right to admission into the Union. We believe she is now ready to assume the responsibility of statehood—to cast off the burdens and inconveniences of Territorial vassalage. She can now ask for admission with hope of success. Her time has arrived. For the first time in ten years public opinion in the older States has so changed as to view the admission of new States with a fair degree of favor. If not admitted at this time, we may reasonably expect the wave of public sentiment will soon recede and the old unfavorable attitude toward the Territories will be again established. In this event our admission as a State would become so problematical that we need entertain no hope of obtaining the rights and benefits of statehood for the next ten years.

While the cost of State government is increased over the Territorial government in some departments, the savings in other departments, the retrenchment in other directions, the increase of population and assessable property that will follow our admission as a State will in a short time materially lessen the burdens of taxation, while to delay our application for admission until the “swing of the pendulum” of public opinion has reached the opposite position from that so favorable now to the formation of new States will be to fasten upon us for a long term of years all the abuses of financial management that have made our taxation burdensome and made plethoric the pockets of public officials at the expense of the tax-payer.

PUBLIC LANDS.

By the terms of the Senate bill for the admission of Wyoming there are donated to the State the following public lands :

	Acres.
Agricultural college lands	90,000
Scientific school lands	100,000
Normal school lands	100,000
For charitable and penal institutions	300,000
For public buildings	32,000
Total	622,000

In addition to these lands the State is authorized to select, in lieu of sections 16 and 36 in each township found to be mineral lands, an equal amount of agricultural lands. It is believed that at least 500,000 acres of these lands will be found to be mineral. This would give the State of Wyoming available agricultural lands to be selected at once upon her admission, to the extent of 1,122,000 acres. If statehood should from any cause be delayed for the next ten or fifteen years, the choice agricultural lands within the limits of the State will have been disposed of, and the donations of the lands to the State would thereby be rendered of less value. There is also donated to the State for the support of her public schools 5 per cent. of the proceeds of all public lands sold by the United States after our admission as a State. This fund alone would average not less than \$20,000 a year, and a delay of ten years in our admission would entail a loss from this source alone of \$200,000. The lands donated and selected, if leased at 5 cents an acre per annum, would produce in ten years a revenue of \$561,000. It thus appears that delay of statehood means for us a loss in ten years from these two sources of \$761,000, or \$76,000 per annum.

THE CONVENTION AND THE CONSTITUTION.

The delegates in this convention came from both political parties from all sections of the Territory. It was non-partisan in character; indeed it may be truthfully said that in its deliberations there was at no time a division of its membership on party lines. Sectional questions were at no time considered, but to act for the common good of the whole people of Wyoming seemed to be the ruling motive. The material, industrial, and professional interests were represented in its membership, and no outside influences were permitted to affect their action.

The constitution adopted is believed to be fairly conservative and also progressive. It is the first constitution adopted by man which gives to each citizen the same rights guaranteed to every other citizen. Under its provisions pure elections are practically guaranteed, and economy of administration assured. Restrictions upon legislation

and loose appropriations of public moneys are clear and positive. The salaries of officers have been fixed according to the value of the service rendered and in proportion to the means of the people to pay. Public trusts are carefully controlled and corporations restricted to a single line of business. The establishment of compulsory courts of arbitration to settle disputes between corporations and their employés, the protection of laborers in mines, the prohibition of the importation of foreign police to usurp local authority are all measures that commend themselves, and in the convention received the support of the representatives of both capital and labor. The extravagance in the management of county affairs that has prevailed in the past has been circumscribed and rendered impossible. The restrictions upon taxation and the creation of public debts are such as to necessitate economy in public affairs and insure to the people the highest excellence in government for the least money.

In the interest of local self-government, to promote the general good, and to encourage the future growth and development of the State of Wyoming, the constitutional convention having finished its work, respectfully solicits your candid consideration of the constitution herewith submitted and ratification of the same by your suffrages.

M. C. BROWN,
C. H. BURRITT,
H. G. HAY,
M. N. GRANT,
JESSE KNIGHT,
G. C. SMITH,

C. P. ORGAN,
H. A. COFFEEN,
D. A. PRESTON,
MARK HOPKINS,
F. H. HARVEY,
Committee.

MONTANA



UTAH

COLORADO

